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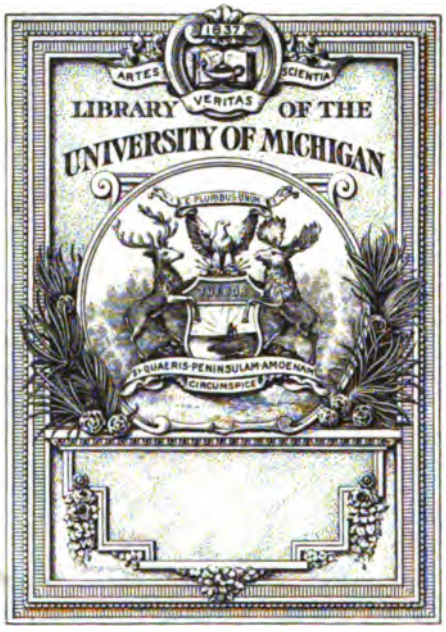
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Original Lectures.

ON CONJUNCTIVITIS.

A CLINICAL LECTURE DELIVERED AT THE UNIVERSITY MEDICAL COLLEGE IN THE CITY OF NEW YORK, JAN. 31, 1878.

BY D. B. ST. JOHN ROOSA, M.D.,

PROFESSOR OF OPHTHALMOLOGY.

(Reported for THE MEDICAL RECORD.)

GENTLEMEN:—I will make this case before us a text for a few remarks upon *conjunctivitis*. The history gives us very little information as to the causes of the attack of inflammation of the conjunctiva. There was no exposure to dust, or cold, or wind, or any excessive use of the eyes; nor was there, so far as we can learn, any contact with other inflamed eyes. This woman spent most of one day ironing clothes. She has never had a previous attack of this disease. On the day previous to that spent in ironing, she read considerably, however. That was four days ago, and she now has inflammation of the conjunctiva, which has been treated, at the Manhattan Hospital, by the use of astringents and the sulphate of atropia.

I happen to know that the patient has a chronic disease at the back part of the eye, for she was under my care for choroiditis at the Eye and Ear Infirmary some fourteen years ago. This condition renders her rather more liable to conjunctival inflammation than she would be were the back part of the eye sound. Such is my text, brief though it may be.

Conjunctivitis—Inflammation of the Conjunctiva. Conjunctiva, from two words, which mean to join together—the mucous membrane which joins the lids with the globe of the eye. Conjunctivitis is an affection which every practitioner of medicine is bound to know how to treat.

It is an affection which must not be confused with iritis, or rather, iritis should not be confounded with it. It occurs as frequently as pneumonia or pleurisy, and it may and does destroy eyes, and thus, sometimes, renders the state of the man or woman affected much more mournful than if the victim had been cut off by either of the inflammations of the chest.

Conjunctivitis is divided into three general varieties. Such divisions are somewhat arbitrary, however; you cannot always distinguish one from the other, any more than the United States can be distinguished from Mexico as we pass over the artificial boundaries between the two countries. In many cases, then, you will not be able to make the divisions, and, in others, they can be made with considerable satisfaction.

1. *Catarrhal Conjunctivitis.*—Under favorable conditions, this is a self-limited disease, as much so as measles, or scarlet fever, or pneumonia.

Its chief symptoms are: hyperæmia of the conjunctiva, the network of blood-vessels is injected, not particularly marked towards the ciliary region, but there is a general vascularity of the membrane. A pure catarrhal conjunctivitis is not attended by great lachrymation or photophobia. There is no sluggishness of the pupil, and there is no deep-seated pain. The other characteristic symptom is increased secretion—hence the name catarrhal.

The patient's subjective symptoms are not important to the diagnosis, but they may be roughly stated as a feeling as if sand was in the eye, and a blurring of the sight. The sensation of roughness is due to the pressure of the enlarged blood-vessels, and the blurred vision to the presence of mucus and tears upon the cornea. All that this form of conjunctivitis requires in way of treatment, in many cases, is to keep the eyes clean. This can be readily done by bathing them in pure cold water. The patient should also wear a pair of protecting glasses—not goggles, which will keep the eyes free from dust and everything that may excite inflammation of the conjunctiva.

But a simple catarrhal conjunctivitis occurring in delicate persons, especially children, amid bad hygienic surroundings, and among persons who are not noted for habits of cleanliness, may run into phlyctenular conjunctivitis almost before you are aware of it. Then you will see, most commonly near the margin of the cornea, either little yellowish red elevations mounted by a vesicle, or a small ulcer, which has been formed by the rupture of a previous vesicle.

This form of conjunctivitis, at its outset, requires a local anodyne—atropia—and a great deal of general care; but to-day I only desire to speak of the three forms of pure conjunctivitis, catarrhal, blennorrhœal, and purulent. Again, catarrhal conjunctivitis occurs in persons who are exposed to any continued depressing influences, or who are obliged to work in places where they are exposed to mechanical irritants which are liable to excite new inflammatory action; and under such circumstances the disease may advance to the chronic stage, or go on to blennorrhœa. For example, catarrhal conjunctivitis occurring in a student who continues under the depressing influence of the dissecting-room, who goes on with his studying and note-taking, who continues to sit in the bad air of the lecture-room, is very apt to advance to a blennorrhœa, or, what is more likely, become a *chronic catarrhal conjunctivitis*. A mechanic with acute conjunctivitis will soon have a blennorrhœa, or a chronic inflammation, if he persists in his work.

With reference to *treatment*, it is perhaps safer to tell you that it is best to treat a simple catarrhal conjunctivitis by using locally some mild astringent, like the sulphate of alum or zinc, in solution of about two grains to the ounce of water, as well as washing the eyes with cold water and placing the patient under favorable hygienic influences. Besides this, cold water may be freely used on the closed lids, as a douche, or by means of small bits of cloth. It is well, however, for you to remember that the disease, like many others, has a marked tendency to get well, and that you are not to attack it with blisters, or nitrate of silver, or to place the patient in a dark room, and so forth, as though it were a case which demanded the most vigorous and heroic measures at your command.

But, let us suppose that the disease goes on to the next stage—to blennorrhœal conjunctivitis—in which we have to deal with something more than mere hyperæmia, with very decided increase in the natural secretion.

There is now a positive increase in the natural secretion of mucus; with this there is mingled more or less pus, especially at the corners of the eyes. There is also slight engorgement of the lids, and an engorgement of the papillæ of the lids; perhaps also a swelling around the margin of the cornea. Here you have to deal with a condition which demands a much more active and persistent course of treatment than that recommended in simple catarrhal conjunctivitis; you cannot trust alone to change in hygienic surroundings and the adoption of certain rules regarding cleanliness, but you must use astringents.

What does the astringent do? In the first place, it increases the hyperæmia, it increases the quantity of serous exudation; in short, it increases the inflammatory process in which the disease itself consists, but its secondary effect is to constringe the blood-vessels, and perhaps the adjacent tissue, and following this comes the relief for the hyperæmia and the inflammatory process. An astringent caustic does more than this. It actually causes an eschar, which is thrown off.

In these cases you will need to apply, not only simple astringents, but, perhaps, caustic astringents. Of these latter, nitrate of silver and sulphate of copper hold perhaps the first rank. Almost the only guide you can have with reference to the use of these astringents and caustics, is the effect produced upon the patient.

If he suffers for more than half an hour from the increased severity of the symptoms caused by your astringent application, it is pretty good evidence that the astringent employed is too strong, and either a weaker solution, or a milder agent must be employed, or perhaps the astringent be given up altogether for a few hours, or a day or two.

If symptoms of corneal, or deeper-seated inflammation arise, an anodyne application of sulphate of atropia, two grains to the ounce, should be used three times a day.

It is a wise practice in ophthalmology to use as few applications, or agents, at any time, as is consistent with good care of the eyes. When a patient suffering from acute catarrhal conjunctivitis is pursuing an employment that of itself is likely to expose his eyes to injurious influences, very much will be accomplished by simply putting him under proper conditions of life until the attack be over. If this be not done, although there may be no advance to a higher form of disease, there may be a gradual sliding into a trachoma. When trachoma is reached, we have come to a very obstinate and sometimes incurable condition. For there is thickening and warping of the cartilage of the lids, the eyelashes may be constantly brushing upon the conjunctiva, and the patient has a sensation as if ten thousand grains of sand were in the eye. As a result of this constant irritation, the delicate structure of the cornea is very much injured. Its epithelium and deeper layers are involved in disease, and the case may become one of pannus, and perhaps one of ulceration. Then add to the condition of affairs, eversion of the lids, so that the tears, instead of passing away through the natural channel, flow over the cheek and keep the face in a more or less constant state of excoriation, and you have one of the most distressing of conditions. It is a condition that cannot be permanently and thoroughly remedied by any operation or course of treatment, although susceptible of relief. Eversion and inversion of the lids may be corrected for a year or two by an operation, but the relief is usually only temporary and the condition returns; for the state of the parts is such that it is impossible to restore the lids to their complete functions.

To recapitulate: granular lids, trachoma, opacities, vascularities, and often perforation of the cornea, entropion, ectropion—all consequences of blennorrhœa; and many of them incurable conditions, which can only be alleviated, but never thoroughly cured. Hence it is that conjunctivitis, in its early stages, has its importance for the general practitioner.

We next come to the form of conjunctivitis which is the most important of all—the *purulent variety*. I could relate some very sad stories regarding children who have been born with good eyes, but to which, through the carelessness of nurses, little particles of pus have been transmitted from towels; or who have been inoculated with pus from the genitals of the mother, and who, within a few hours after birth, have had fully developed purulent conjunctivitis, and who, having their eyes improperly treated by poultices, have lost them. The conjunctiva is engorged with blood, and the lids become so swollen that it is impossible for the child to open the eyes, and pus wells up through the palpebral fissure.

Now, if by the application of a poultice, which has frequently been done, the disease is fostered, it will extend, and within forty-eight hours from the time of the commencement of the disease the child's eyesight may be destroyed. The cornea has been actually broken down by the poultices. But there is another story. A man or woman becomes affected with urethral inflammation, and through want of personal cleanliness, or by carelessness, pus is transmitted from the seat of disease to the conjunctival sac. Within a few hours you will see developed all the acute inflammatory symptoms which usher in an attack of purulent conjunctivitis.

Purulent conjunctivitis has a malignancy of its own, whether arising in the new-born child or in the adult, from urethral contagion and want of personal cleanliness, or whether it arises as a natural termination or advance of acute catarrhal blennorrhœa.

There is a popular idea that a purulent conjunctivitis arising from infection from a suppurating urethra is more severe in its course than the same form of disease arising from other causes: but this is probably an error.

Purulent conjunctivitis also occurs epidemically, especially in hospitals, in workshops, in armies, and in badly ventilated rooms where many people are crowded together.

There is another point to be mentioned. A drop or atom of material removed from a catarrhal conjunctivitis occurring in my eye may excite a purulent conjunctivitis, if transmitted to a healthy eye. This shows that it is the same disease in both instances, the cases differing only in intensity.

Now, what is to be done when you meet with a case of *purulent* conjunctivitis?

There is one thing which it is very important *not* to do, and that is, to stand still with folded arms. You must know what to do, and you must do it with the very greatest celerity. If you are called upon to go into the country twenty miles, and upon your arrival find that you have to deal with an inflamed eye, the lids of which are so swollen that they are shut, and pus is streaming up between them, do not simply tell the friends to wash the eye out once or twice a day with alum-water, to put on a poultice to quiet the pain, and perhaps leave a two-grain solution of nitrate of silver to be introduced into the eye occasionally, with directions that the patient be placed in a dark room, with quinine or calomel to subdue the fever. If you do pursue this plan the patient will

almost certainly lose his eyesight, and for that loss you should be held responsible, and no one else.

Instead of that, do just what your common sense would dictate should be done when a man comes to you with one or both of his eyes filled with cinders or dust. What would be the first thing suggested by the common-sense rule of practice? Certainly it would be to wash out the cinders and dust.

The first thing to do, then, when called to a case of purulent conjunctivitis, is to remove the pus from the eye. If necessary, the eye should be washed as often as every half-hour, and it will be your first duty to instruct the mother, the sister, the brother, or the nurse, so that this part of the treatment may be continued regularly and thoroughly, just as often day and night as may be necessary. When you have so instructed the attendants that the eyes can be kept free from any accumulation of pus, you will have done your duty, and not until then.

Thorough cleanliness, then, is one of the most important elements in the treatment of this disease. This can be accomplished by syringing out the eye with tepid water, or, perhaps better, by wiping the eye with a piece of soft sponge or bits of soft cloth which have been dipped in tepid water.

Again I say, gentlemen, see that the eyes are kept clean, and for their cleanliness hold yourselves responsible.

In this early stage, if the swelling of the lids is very great and the temperature is increased, cold applications should be made, and that is best done by using bits of cloth which have been made cold by being placed on a block of ice or dipped in ice-cold water, such as one can get from the bottom of a well, even in midsummer. These cloths must be changed sufficiently often to avoid any possibility of their becoming warm enough to make a poultice. This will sometimes be every two minutes. The application of cold should be kept up constantly, day and night, until the temperature of the lids is reduced and the hyperæmia lessened.

When this has been accomplished, you may begin the use of astringents, and for children as good a one as any is a two-grain solution of alum in water, allowing the solution to pass between the lids. This should be employed about twice a day. There is some difference of opinion with reference to the astringent to be employed; some claim that nitrate of silver possesses peculiar advantages; but I feel satisfied with the effects produced by the alum solution, and I am sure it is a safer application for young children. Perhaps when you come to the treatment of adults you will not feel satisfied with the effects produced by the alum. If not, the nitrate of silver may be used in ten-grain solutions. If the nitrate of silver is used, it is important to neutralize any excess that may be applied with a solution of chloride of sodium. The mitigated stick (nitrate of silver and nitrate of potash) may also be used on adults. If the tension of the lids is very great you may be obliged to take your scissors and divide the external canthus, cutting through the conjunctiva, the muscle and the integument at the same time, so as to loosen the lids and relieve the pressure. This operation is called canthoplasty.

If that symptom is present, which is very likely to occur in the advanced stages, namely: engorgement of the conjunctiva about the margin of the cornea, or chemosis, the swollen ring of tissue may be snipped here and there with the scissors; in that way the hyperæmia and the tension may be somewhat relieved. If the patient is vigorous, leeches may be applied to the temples in the very early stages. Until the acute inflammatory symptoms have subsided, only mild astringents, not astringent caustics will be required.

Indeed, after their use has been commenced, it may be necessary to discontinue them because of the inflammatory reaction which they may produce.

While the inflammation is intense, attend thoroughly to cleanliness and the application of cold as the chief resources of treatment. With cleanliness alone you will be able to effect a cure in very many cases of ophthalmia neonatorum, although I should be unwilling to rely upon a treatment wholly without astringents.

What are the dangers in purulent conjunctivitis?

They relate chiefly to the cornea and they are very great.

For, if all the other parts of the eye are perfectly sound, and the cornea is completely opaque, the sight is lost, the world is nothing to the patient, and you will not be able to do anything to bring relief.

The object of treatment, then, is to save the cornea; *first*, from the influence of the acrid pus, and *second*, from increased tension. At the same time, when you use an astringent caustic, you must use good judgment in order not to affect the cornea by it. You are always sailing between Scylla and Charybdis in the use of caustics in these cases. The caustic that I would advise you not to use is the *solid* stick of nitrate of silver. It is almost impossible to guage its effects.

When once the disease has reached the stage in which the cornea is infiltrated with pus, you are to know that your case is in a dangerous condition, and you will need all the skill and judgment you can possibly obtain if complete loss of vision is prevented.

Under such circumstances you may tap the cornea, possibly do an iridectomy, use atropia; but I do not dwell upon these points at this time, because I wish especially to impress upon you the importance of proper treatment in the early stage of the disease. I wish especially to impress upon you the difference between the early stage of purulent conjunctivitis and the early stage of a simple catarrhal conjunctivitis. For, if properly treated during the early stage, you will succeed in saving a large percentage of eyes; but if poultices are applied and pus is allowed to remain under the lids, the cornea may be destroyed in less than a week, and, as a matter of course, vision is lost forever.

A word or two as to the prevention of conjunctivitis and its consequences. When you enter upon the practice of your profession and are called upon to take medical charge of asylums, county-houses, or any institution or place where large numbers are congregated, it will be your duty to guard against the occurrence of epidemics of ophthalmic disease; and, if purulent ophthalmia is developed, or catarrhal ophthalmia appears, or better, when the eyes are sound, to see to it that each patient has a separate place for washing the eyes, has separate towels, is not permitted to sit in a room while it is being swept; that plenty of fresh air is furnished, and that the patients are not permitted to strain their eyes by attempting to read by the aid of bad light. In other words, it is your duty to see to it that conjunctivitis is not caused or propagated through any neglect on your part. You are only exercising your highest functions as physicians, when you are guarding against the occurrence of disease. You must labor to impress yourselves upon the communities in which your lot is cast, as one of the directors of their sanitary condition, and not

be content with being sent for when an epidemic is upon them.

I am here asked by one of the class, if diluted milk is not a good wash to be used in conjunctivitis.

Gentlemen: The good Lord has given us plenty of pure water for the purpose of securing cleanliness in the treatment of disease, as well as in health; but there seems to be a disposition to seek out mysterious and extraordinary agencies for simple purposes, while the study of the principles of treatment is neglected. Be not anxious about the details of prescriptions; be anxious only to know the general principles, and your application of them may vary from each other and yet all be correct.

Milk is well enough, but it is not so good as water; and water is much more accessible, and perhaps is less liable to act as an irritant to the eye, especially at certain seasons of the year.

I have spoken of alum as the astringent which I employ in conjunctivitis, but I am not wedded to that one, sulphate of zinc, or other astringents. Indeed, I care very little, within certain bounds, what astringents you employ. I have not been anxious to teach you what astringent you should employ, but rather to indicate in a general way the nature of simple conjunctival inflammation, and the principles which should guide you in its treatment.

Original Communications.

ACUTE INTESTINAL CATARRH OF INFANTS,

And its Treatment by Mercuric Chloride (Corrosive Sublimate).

By RUDOLPH RAVENBURG, M.D.,

WASHINGTON, D. C.

This remedy is not new. Ringer, in his Hand-book, gives a very good description of the discharges which characterize this disease, and assigns to mercuric chloride the first place among the many remedies which have been found to be useful or curative. It is not in the dose, but rather the manner of exhibiting this medicine, that I differ from him, and to which I desire to call the attention of the profession, at a moment, I hope, when any suggestion, proving useful and curative, will certainly be acceptable.

For convenience' sake, and to avoid the danger and errors of drops, I prescribe one grain of the mercuric chloride to twelve ounces of distilled water. One teaspoonful to be mixed with an ordinary teacupful of milk, previously subjected to at least 150° F. for five minutes; the milk should never be brought to the boiling point. Of the milk so prepared I give to the infants as much at a time as age and the condition of the patient may demand. It is just here where the judgment of the attending physician is most required.

Exhibited in this manner, mercuric chloride will in the first twenty-four hours change the character of the fæcal discharges, and in a few days, without any other remedy, gradually lessen and restore them to their normal condition. This in ordinary cases. In the severer forms of this disease, it may be necessary to use this remedy with a cupful of boiled and cooled water as an injection into the rectum. If desired, starch and laudanum may be added as the physician may deem proper.

Now for the *rationale* of this treatment.

In January, 1874, after partaking of a glass of buttermilk, I suffered a few days after from a severe attack of diarrhœa, which soon assumed the form of acute dysentery, with its great prostration, the discharges being large in number, small in quantity, consisting of grayish mucus, tinged in spots deeply with blood; the burning and tenesmus of rectum intense.

Subjecting the grayish and slightly tinged masses to microscopic observation (350+), I was at once struck with the number of micro-entozoa, resembling the infusoria seen in summer-time in the water in which a bouquet has been kept for a few days. They were slightly larger than a full-sized red blood-corpuscle, oval in shape, flat; no ciliæ could be discovered with the power used; they appeared sharply defined, perfectly transparent, to allow the red blood-corpuscles over which they moved to be readily seen; their bodies contained two nuclei or vacuoles, one large, the other small, increased for convenience; their movements were as rapid as those of the vinegar eel—in straight lines, however, going quick from object to object (blood-corpuscles or débris); on inclination of slide they readily and as rapidly moved against the current of plasma and blood corpuscles, and the number in the field of No 7 Hartnack, with 0 eyepiece, was between 20 and 40.

Thinking that the severe burning and tenesmus might be due to these infusorial micro-entozoa, I used an injection of 10 ♏ of olei terebinth. and acid. carbol. each to two ounces of water; (this solution or mixture I had formerly found to be instantly effective in destroying the common infusoria;) retained this injection over night, and in the morning found complete relief. Another injection and an exclusive dry diet proved a rapid cure. Since then I have read of a case of chronic dysentery (Virchow's Archives, 1875 or 1876), which occurred in St. Petersburg, Russia: amœbæ were found in the evacuations, and the case resisting ordinary internal treatment, medicated injections, with a view of destroying these amœbæ, were used with complete success and a rapid cure. This case is extremely interesting, minute in detail, and the cuts very fine; the whole deserves careful reading. In this case, however, these bodies possessed only the slow amœboid movements, threw out prolongations, and only their great size made it possible to differentiate them from the white blood-corpuscles. In my own case they were much smaller, and resembled the lower infusoria, besides being possessed of an extremely rapid motion, while the red blood-corpuscles remained perfectly stationary, or on inclination of stage followed the current only. Yet the cure was as prompt and rapid.

In the same journal I also saw an article on the comparative value of anti-ferments (bacterium hindernde chemicalien); and to mercuric-chloride was there assigned the first place, 1 in 25,000 being sufficient to completely sterilize the fluids used. This drew my attention to this remedy, and my infant son was the first in whose case it was with that view employed. Being artificially fed—the mother having but little milk for him—the Borden Eagle Brand condensed milk was used in summer, and the Swiss imported in winter. Being born in February, his milk and boiled water were accidentally placed in a refrigerator in early June, and within a few days his stools increased from two a day to six and eight, and showed the usually grass-green color, being largely mucous. Subjecting these mucous masses on the spot to microscopical examination showed the presence of

large numbers of these micro-entozoa, and pursuing the treatment above recommended, with an injection of a few ounces of mercuric chloride solution, proved without any further means a complete cure. As I laid the infection to the keeping of milk and water in the refrigerator, I at once ordered it to be kept on the mantelpiece simply, covered with clean napkins, and I had no further trouble. I cannot here lay too much stress upon the fact that articles used for the infants' food and their drinking water (which latter I allow only to be used after boiling and cooling), should under no circumstances be kept in an ice-chest or closed cupboard, as this will invariably prove dangerous to the infant.

Now the quantity of mercuric chloride is sufficiently small to allay any fears of danger, and as for remote effects, I can see none so far in my young son; besides, the valuable experiments of Keyes have sufficiently proved it to be an excellent restorer of the red blood corpuscles, and that it may be taken for a long time without producing a decrease in their number, and consequent anæmia and weakness. And as to the quantity required to produce a cure—$\frac{1}{200}$ to $\frac{1}{100}$ of a grain extended over two or three days—such is altogether too small to produce constitutional effects. The curative effects are magical. It is possible that salicylic acid—or perhaps better, thymol—may answer equally well; but I am so far satisfied with the action of this mecurial preparation. Still, thymol is worth a trial, used in the same manner as above described.

Now the experiments of Lister on bacterium lactis have proved that infection is in the ratio of the number of the bacterium lactis or its spores introduced into the milk. The experiments of Tyndall—and they were extremely interesting and valuable—have also proved that putrefactive infection depends upon the kind and quantity of bacterium or its spores introduced into putrefiable mediæ. Tyndall has also shown that if the mediæ (fluids or solids) are subjected to 150° F. heat for at least two to five minutes, and if this heating process is practised every five or six hours for a day or two—with the object of destroying any bacteriæ which have escaped as spores—they can invariably be *sterilized* for an indefinite time.

An infant nursing its mother receives, therefore, its food supply in an almost chemically pure state, and the few bacterial or infusorial spores which it might receive into its stomach may be easily disposed of. But in the case of a bottle-fed infant this is different. Every article used is exposed to the atmospheric dust for longer or shorter periods, and when at last it gets its food, milk, bottle, and nipple may furnish more bacteria or its spores or infusorial spores than the digestive power is able to destroy. Putrefaction results, and, once established in the summer-time, infants must succumb, unless the putrefactive process is destroyed or the supply of infective material cut off by removing the infant from the impure city atmosphere to the purer one of high altitudes.

Height above sea level or pure sea air cuts short these summer complaints. Removal from the city into the country with low level is of little avail, and often worse.

The great hyperæmia which the alvine discharges in this disease produce in the anal fold and the surrounding integument which they may touch is sufficient to enable us to judge of the condition of the intestinal tract. It is certainly the same, and without doubt worse. The external aspect of the inflamed integument is more than erythematous, it is nearer erysipelas, but yields readily to salicylic acid and starch in powder.

While the high summer temperature greatly debilitates the nervous system and weakens the digestive power, yet I still assign, according to Tyndall and Lister's views, the first place as factor in this disease to the advanced condition of infusorial and bacterial spores possessing or carrying with them putrefactive powers. Their sterilization before introduction with the food, or their destruction in the intestinal canal, must be our aim if we desire to save infantile life. Heat is the safest sterilizer, and a bottle-fed child should be given no food in summer-time which has not been submitted to a proper degree of heat for the proper time. Heat and time are both valuable factors. The food of such infants should be rapidly cooled and given to them as cool as is palatable to a grown person during the heated months—never even milk-warm between the early days of June and the beginning of September. For this advice I am indebted to Asst. Surgeon J. H. T. King, U S. Army. (See New York MEDICAL RECORD, June, 1872.) It saved my second child.

Strive to obtain chemical cleanliness of food and vessels, and little of this fatal disease will be known. For children up to nine or ten months, an exclusive milk diet should be enforced during the summer months. For children above that age, Imperial Granum is the most elegant and useful addition, or perhaps any of its equivalents. With Borden's Eagle Brand of condensed milk for the summer months, and the imported Swiss for the winter, bottle-fed children of normal health should certainly get along. The former is more binding, the latter the opposite. Microscopically, they differ, so far as I can see, in the sugar mainly, the crystals of the Borden brand being larger, more angular, and in greater quantity. Those of the imported Swiss are smaller, roundish, and less in number. The occasional addition of some lime-water is advisable, as the excessive quantity of crystallized sugar used for the preservation of the milk has a great tendency to increase the renal secretion, and may interfere, if too long continued without the addition of the wheat phosphates, with the normal development of osseous tissue.

To prevent this, Binz recommends the use of "Leguminose" in addition to the condensed milk, for two purposes: it separates the cascin into finer flocculi, making it thereby easier digestible; and secondly, being in part the flour of lentils, containing, therefore, silicious material, its use will prevent that osseous cachexia, which, through the excess of sugar ingested, may end in osteomalacia.

For children over twelve months old, good milk from healthy cows bad better be used, providing it has been sterilized according to Tyndall's recommendations.

To judge from the manner and method of treatment of infants by many parents, they are certainly not worthy of the precious trust God has given them, and Nature has wisely decreed their loss.

But many worthy parents are ignorant of the slight mistakes which, committed without the least forethought, bring their little darlings so close to the grave, if not within it. To save these must be the pride of the physician.

No words can ever better express the nobility of our calling than those addressed by Baron Larrey to Napoleon the First, when at the siege of Jaffa he addressed this great chieftain thus: "Sir! it is my avocation to prolong human life, not to destroy it."

A CASE OF INTUSSUSCEPTION—LAPAROTOMY—DEATH.

By JAS. L. LITTLE, M.D.,

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A. G. N., a little girl aged four years and eight months, had, with the exception of being a little costive at times, enjoyed good health up to March 7, 1878. On this day, about 7 A.M., while attempting to have a passage from the bowels, she complained of severe pains, which, however, lasted but a few minutes. About an hour afterwards she was again seized with pain while having a natural evacuation of the bowels. After this she seemed to be as well as usual, playing around the house and feeling quite merry. At 10.30 A.M., however, she was attacked with another paroxysm of pain that lasted about half an hour. During the afternoon she had several of these attacks, accompanied by vomiting and slight evacuations from the bowels, the latter consisting entirely of mucus stained with blood.

Dr. Laurence Johnson, of 323 West 27th street, saw the child about noon, and upon examination pronounced the case to be one of intussusception. Having recently treated a case successfully by distention, he injected large quantities of warm water into the bowel, and also tried to distend the intestines with air. This did not give relief, and seemed to increase the already severe pain. At 5 P.M. Dr. Johnson discovered an elongated tumor in the abdomen, in the situation of the descending colon. At this time no swelling or protrusion could be felt in the rectum; but, upon examining again at 7 P.M., the invaginated intestine could be touched with the finger.

At 8 P.M. I saw the child with Dr. Johnson. She was at that time quiet, being under the influence of paregoric, it having been administered during the afternoon. She had not vomited for several hours. The temperature was then 100¾° in the axilla and 101° in the rectum. On examination I found the abdomen flat, and a hardness could be felt located along the line of the descending colon, feeling somewhat like a contracted rectus muscle. A paroxysm of pain caused this swelling to increase in size and hardness. There was dulness on percussion, and considerable tenderness on pressure. Rectal examination revealed the invaginated intestine reaching down to within a short distance of the anus. The finger could be passed directly around the inverted gut, and also into its lower opening. This examination gave rise to a paroxysm of straining, accompanied by severe pain.

The diagnosis being perfectly clear, and the treatment by distention having been already tried, laparotomy was advised. To this the parents readily consented. The operation was commenced at 10.30 P.M., Drs. Robert F. Weir, Laurence Johnson, Waitzfelder, and Mr. W. C. Campbell, one of my students, being present. All arrangements were made to operate according to Mr. Lister's method. The beautiful spray apparatus, manufactured by Codman & Shurtleff, of Boston, which throws an exceedingly fine cloud of spray, was used. New sponges were thoroughly washed in a solution of carbolic acid, of the strength of one part of acid to twenty of water. A solution of the same strength was used for the spray. The instruments were placed in this same solution for half an hour before the operation. The 1-40 solution was used during the operation for the sponges and instruments. Chloroform was administered to the patient instead of ether, on account of the danger of fire with the latter, should it come in contact with the flame of the atomizer lamp, and also to prevent the vomiting and sickness which usually follow ether.

An incision, about two inches in length, was made in the median line of the abdomen, a little below the umbilicus, and carried through, until the sub-peritoneal fascia was reached. Before cutting through the peritoneum, the little hemorrhage resulting from the incision was easily controlled by torsion; one small vessel only requiring this means of arrest. The peritoneum was then opened, three fingers passed in, and the tumor searched for.

The hard swelling, which had been felt from the outside, was easily distinguished and traced upward beyond the reach of the fingers. The opening being too small, it was enlarged upward, above the umbilicus to within an inch of the xiphoid cartilage. The small intestine now protruded from the wound, and hung over the right side of the child's body.

By pressing with the thumb and finger on the lower part of the hardened mass, the intestine was gradually followed up, until the seat of the invagination was made out and brought into view. Then, with gentle squeezing below and pulling from above, the intestine was seen emerging from the colon. This was continued until the colon was emptied.

An examination of the parts at the seat of the intussusception showed considerable ecchymosis and some thickening. The appendix vermiformis and cæcum could not be distinguished. The intussusception appeared to be of the variety known as the ileo-colic, and the length of the invaginated portion was estimated at the time at about one foot.

Great difficulty was now experienced in returning the protruded intestines into the abdominal cavity, and the reduction was not completed until several silver wire sutures had been put in the abdominal walls, while the intestines were firmly held down. The edges of the wound were brought together with eight silver wire sutures, and Lister's dressings applied. Lister's method was fully carried out during the operation, not a single detail being omitted. Collin & Co.'s small illuminator was of great assistance.

At 12.30 A.M. the patient was put to bed, and recovered from the influence of the anæsthetic about 1 A.M. At this time one drop of Magendie's solution was administered by Dr. Johnson, and repeated every hour until 6 A.M. She sank gradually but steadily from the time of the operation up to 5 A.M., from which hour she began to fail very rapidly until 7.30 A.M., at which time she died.

60 WEST FORTIETH STREET.

MEMBRANOUS DYSMENORRHŒA.—Dr. Ranking reports a case of membranous dysmenorrhœa that was much benefited by the application of Chapman's spinal hot-bag to the lumbar region for two hours three times a day, and ten drops of Donovan's solution taken internally three times daily for three months. The general effects produced were diminished formation and thickening of the membrane, it becoming less leathery and more distinctly cellular; increased facility of separation of the membrane, and more rapid and complete expulsion; shortening of the menstrual period from ten to four days; more rapid recovery, in consequence of the diminution of pain and uterine action; benefit indirectly accruing from diminished bruising of the cervical canal; smaller quantity of morphia required; no iodism or mercurialism.—*The British Med. Jour.*

TWO CASES OF TRAUMATIC TETANUS SUCCESSFULLY TREATED BY CALABAR BEAN AND WHISKEY.

By MARTIN BURKE, M.D.,

NEW YORK.

During my service as surgical interne in a well-known hospital, there occurred about twenty cases of tetanus, of which four, possibly five, terminated in recovery; of these, two were under my immediate control. The first case was Ed. Higgird, æt. 33, who was admitted to hospital July 23, 1877. Patient stated that ten days before, while walking in his bare feet, he stepped upon a rusty nail and ran it into the ball of his left foot. The pain was slight and the wound healed rapidly. Two days before admission he was surprised by a marked stiffness of his lower jaw, which gradually increased; his abdominal muscles also stiffened and he began to perspire continuously; he also complained of occasional "jerks." He swallowed with difficulty. On examining him I found he could only open his mouth about an inch. He looked haggard and weak. I ordered him to bed, and as his tongue was coated and his breath foul, I gave him castor oil and ordered drop doses of fl. ext. physostigma to be given hourly. This preparation, I was informed by the apothecary, was of the strength of sixty grains to the drachm. At 2 o'clock P.M., potass. bromid. was ordered. In an hour patient slept. Directed a calabar bean to be given as early as 5 o'clock.

July 24th.—At 10 A.M. I made my rounds: my patient had not so much pain in his abdomen; his other symptoms were about the same. Dr. Phelps, Visiting Surgeon, saw him to-day, and advised me to increase my calabar until I got its physiological effects. I then increased the dose, giving him a drop every half hour, and with each drop combining ʒ i. of whiskey; this is the only originality about the treatment, viz.: that large doses of whiskey seem necessary to counteract in a measure the terribly depressing effects of calabar bean. I never gave him one without the other, except a little weak milk-punch, which was given ad libitum. Patient can take no solid food; so, large quantities of plain milk were ordered. At 1 o'clock that night I again gave him gr. xxxv. of potass. bromid. July 25th.—The dose of the bean has been increased and whiskey in proportion. Pupils slightly contracted; patient's muscles still rigid. About ninety drops of calabar bean and two pints of whiskey were administered during the twenty-four hours. Two quarts of milk and two eggs were also given. July 26th.—Condition about the same. Physiological effects slightly marked. His perspiration not so excessive; his abdominal pain is less and his twitchings have decreased. Upon placing my hand upon his abdomen a spasm is excited. His temperature is 100½° F.; pulse, 100°. July 27th.—I ordered the "bean" in half hourly doses of five drops, to which I add ʒ v. of whiskey. I ordered milk and beef-tea in abundance. Toward evening, as the action of the drug began to exhibit itself too strongly, I decreased the quantity to minim doses hourly. About sixteen ounces of whiskey consumed to day. July 28th.—Patient a little better; he says he has the "jerks" less frequently; his jaws open more freely Four drops of physostigma given half-hourly, with alcohol in the same proportion as hitherto. As a hypnotic, about one grain of opium and gr. xv. of potass. brom. were given. Temp. 99° F. Patient sleeps well. July 29th.—Treatment continued. Patient's condition the same. At 11 P.M. opium and bromid. given. July 30th.—Patient is much better; his abdomen is not so tense; his face and arms are covered with a papular irruption; upon his face it resembles acne indurata. About ʒ ij. of calabar bean have been administered from 6 A.M. until 12 M. A pint of whiskey has been consumed. Milk and beef-tea ad libitum. July 31st.—Sleeping draught discontinued. Otherwise, the treatment is exactly the same. Spasms are rare; patient in better spirits.

August 1st.—To-day his temperature became normal. Liquid nourishment still continued. Doses of calabar bean not reduced in size; about ʒ iij. taken up to 12, midnight, when patient slept. This plan of treatment was continued in the same way, never giving more than gtt. xiii. of the fl. ext. of calabar bean every half hour, and never using more than two pints of whiskey in the day. His injesta was always fluid, consisting of milk, egg, and beef-tea. On the 30th of August, although he was taking ʒ iss. of the fl. ext. daily, I resolved to discontinue the drug as he had scarcely a symptom. Good care and nourishment now completed his cure.

Case II.—I was so satisfied with the result that I longed for another case to test my treatment anew, and I had not long to wait, for on the 20th of August was admitted to our wards, Patrick Gellows. He said that three weeks before, whilst at work in Charleston, S. C., his hand had been badly lacerated, and four days after his jaws began to stiffen. Shortly after his thoracic and abdominal muscles grew rigid, and finally, August 17th, he had had a violent spasm and lost the use of his legs. August 20th.—He had had frequent tonic spasms since, but none so severe as the first. On examination I found marked trismus, but not so marked as in my former case, and upon suddenly placing my hand upon his abdomen he had a tonic spasm and cried with pain. I ordered him to bed and gave a cathartic immediately. As there was no new preparation of calabar bean in the hospital, I requisitioned some and commenced with the fl. extract, giving him ʒ iij. doses every half hour with the usual amount of whiskey and liquid nourishment, until, on the evening of the 22d inst., he was taking gtt. viii. of the fl. ext. and ʒ iv. of whiskey half-hourly. I gave him no opium. August 23d.—At about 1 o'clock P.M. patient began to vomit and had some severe spasms with marked opisthotonos. I increased the fl. ext. to gtt. ix. every half hour; reduced his allowance of fluid injesta, as I feared he had drank too much milk. At 6.30 P.M. he again had severe spasms, and I now increased the dose to gtt. xi. every half hour. In a short time his pupils were markedly contracted and he complained of numbness of his extremities. I now gradually reduced the dose until at 2 A.M. (24th inst.), he was taking only gtt. viii. every hour. August 24th.—Patient feels better and brighter; his muscles are not so tense as yesterday. From 6 A.M. till 6 P.M., gtt. viii. of the fl. ext. and ʒ iv. of whiskey were given half-hourly. At 9 P.M. he had another violent spasm. I injected hypodermically, ℥ xv. of the fl. ext., and gave him ʒ ss. of whiskey; as he felt better in a short time after this, I ordered gtt. xv. to be given every half hour, and before retiring gave gr. xxx. pot. brom. August 25th.—Patient somewhat better; the same treatment continued; physiological action of the drug slightly marked.—August 26th.—I gave him to-day gtt. x. of the fl. ext. every half hour, conjoined with ʒ v. of whiskey; he bears it remarkably well; he has but few twitches. August 27th.—Patient is much better. August 28th.—To-day I directed the druggist to make an alcoholic solution of the solid extract of calabar bean prepared

by Mascli, of Darmstadt, of the strength of which I resolved to employ hereafter. I commenced with ℥viii. every hour. I gradually increased this to ℥xxii. every hour until patient slept. August 29th.—Patient to-day has had a much easier time, although I can at pleasure produce a slight spasm by passing my hand over his abdomen. To get the physiological effect of the drug, I gradually increased the dose of the solution from ℥xxii. to ℥xxxiii. every hour.

At about 11.40 P.M. I was called to see my patient, whom I found speechless; his pupils contracted to as small a point as I have ever seen in opium-poisoning, and his limbs possessed of an extraordinary rigidity. He appeared to know me. I at once gave him ʒss. of whiskey, hypodermically, and about ʒi. by the mouth, and in about a minute after his pupils began to dilate and he commenced to talk; he declared he had a most terrible dream and imagined he was dying. I reduced his dose to ℥x. every hour. He had another attack some hours after, but large quantities of whiskey appeared to restore him; he still had spasms upon pressing his abdomen, and his trismus still continued. August 30th.—He can move his jaws to-day, and his appetite is better. I continue the drug in doses ranging from ℥x. to xxv. every hour. It is needless for me to continue the details further, as under this treatment he steadily improved; and in September he was discharged cured.

I may only add that I think at no time could my patient have endured such enormous doses of calabar bean, had it not been for the constant stimulation which did not appear to affect his mental faculties in the least. I have seen many cases of tetanus exhibiting in the beginning exactly such symptoms, result ultimately in death despite the use of numerous and powerful remedies, and despite much careful nursing; therefore, feel it my duty to publish my limited experience in the use of calabar bean and excessive and continued stimulation in the treatment of this affection.

147 Lexington Av.

Progress of Medical Science.

Researches on Morbid Local Temperatures.—Prof. Peter, of Paris, has been performing a series of experiments on the temperature of the thoracic wall in the case of pleurisy, under certain definite known conditions, and in comparison with the opposite healthy side. The thermometer was first placed in the sixth intercostal space and then in the axilla of the sound side. His conclusions are as follows: That local hyperthermia following puncture in pleurisy, as in ascites, is the consequence of hyperæmia *a vacuo*.

In the case of pleurisy this hyperæmia is a mechanical addition to the preceding hyperæmia and phlegmasia, for which puncture had no curative effect. Two hyperæmic conditions thus occur in place of one.

Thus there exists necessarily an increase of tension in the vessels of the still inflamed pleura, and the liquid freshly exuded may be richer in leucocytes and hæmatites. The possible purulent transformation of the renewed exudations occurs in certain cases where the puncture has occurred during the very febrile period of pleurisy. This accumulation of hyperæmia, this sharp return of the blood into the pleural cavity, manifests itself by local hyperthermia, explains the syncope, the pulmonary congestion, the consecutive albuminous expectoration, the pain and the oppression going on almost to suffocation, all of which are produced by the sudden depletion in these cases.—*La France Médicale*, May 4, 1878.

Frew on Battey's Operation.—Dr. Frew, in reporting a case of removal of both ovaries by abdominal incision, for obstinate dysmenorrhœa complicated with hysteria, where great improvement of the symptoms resulted, reviews the operations that have thus far been done. The conclusions are interesting as showing that we are beginning to formulate our ideas as to the cases in which this operation is applicable. There are in all twenty instances, according to the records: twelve by Dr. Battey, of Georgia, six by Dr. Sims, one by Dr. Sabine, and one by the writer. In ten of them but one ovary was removed; in eight of the cases no permanent improvement followed; in two, one of Dr. Sims' and one of Dr. Sabine's, cures were reported. These unfavorable statistics have caused Drs. Battey and Sims to abandon the operation. In ten cases both ovaries were removed. Leaving out of the account two cases in which death can be accounted for on grounds apart from the operation itself, two, or twenty-five per cent., died of peritonitis. Of the remaining six, four were cured permanently, one was much improved, and one was not benefited. Seven of the cases were treated by incision of the abdominal walls, thirteen through the vagina. In view of the results Drs. Battey and Sims are inclined to think that abdominal incision is best adapted for the majority of the cases. As for the expediency of the operation in comparison with ovariotomy for tumor, it may be said that the patient has to decide between almost certain death on the one hand and a fair prospect of cure on the other; in the former "she has to decide between a life of suffering (it may be a long one) and a capital operation, which, if it do not kill, may not cure." What, then, it is asked, are the indications for the operation? First in order come cases of obstinate and inveterate hysteria, complicated or uncomplicated with incurable, palpable disease of the generative organs. Secondly, a condition of severe dysmenorrhœa, that cannot be relieved by other treatment. Thirdly, absence of the uterus, the patient suffering from undelivered menstrual molimen. Fourthly, complete incurable atresia of the vagina. Fifthly, presence of uterine fibroids which endanger life by hemorrhage. When the tumors cannot be safely nucleated, the ovaries may be removed with a fair prospect of producing atrophy of the uterus and growths, as practised by Trenholme, of Montreal, and Hegar, of Freiburg.—*Ohio Med. Recorder*, May, 1878.

An Analysis of 112 Cases of Diphtheria Treated during the Last Two Years.—Dr. Van Wagenen, of Newark, has made a very careful study of the clinical phenomena belonging to diphtheria, and the results cannot fail to be of great value to practitioners. He thinks there can be little doubt that the disease takes its origin in filth—an opinion that was reached some years ago by the English sanitary authorities, but he finds it difficult to determine whether the poison "is produced *de novo* in decomposing masses of vegetable and animal tissue, or whether our sewers and cesspools are simply the hot-beds in which the disease-bearing spores are rapidly propagated." Four instances are given in which this condition was shown to be present. In one the well-water was poisoned by manure; in a second the backyard contained a cesspool and privies from which foul matters escaped;

in a third the house had no cellar, and there was stagnant water under it; in a fourth the water-pipe had sprung aleak, and the cellar contained "a pool of water covered with dark-green scum." Dampness superadded to filth is thought to be a powerfully predisposing cause.

As for the season of prevalence, December had the largest number (26); June and July the least (each 3). One of the most important questions of a practical character has always been, "Is diphtheria contagious?" and it is answered by the figures that 59 cases followed direct exposure, while 13 were probably exposed; 40 knew of no exposure. The author is of opinion that the chances of a child exposed are three to one in favor of contagion. There is more danger of contagion in the severer cases, though this is not invariably the rule. The poison was never, so far as he knew, carried in the clothing; contagion was *direct*. Females were more often attacked than men (62 to 50). Under ten years there were 74 cases; from the ages of ten to twenty there were 22; between twenty and thirty, 7; between thirty and forty, 5; from forty to fifty, 3. He divides all cases into (1) *malignant*, where the constitutional symptoms were marked, the membrane rapid in formation and heavy, the sub-maxillary and cervical glands much swollen, and the breath early offensive; (2) *mild*, where the constitutional disturbance was moderate, the membrane slow in spreading, the enlargement of glands moderate, and the offensiveness of the breath overcome by antiseptics; and (3) *diphtheritic throat*, where there was little constitutional disturbance after the first day or two, the deposit small, and glandular tenderness rather than enlargement. Of the first variety there were 32; of the second, or *mild*, 46; and of the third, *diphtheritic throat*, 33. In 104 cases the deposit began in the tonsils, or some part of the pharynx, and of these, 33 extended up into the posterior nares, and 14 downward into the larynx. In 4 it began in the nares, and in 4 in the larynx. The maximum duration of the membrane was 21 days; the minimum, 2. In all, there were about 17 deaths, or about one-seventh of all, and the forms were all malignant. The younger the child the greater appeared to have been the danger, except among very young infants who are not predisposed to the disease. Diphtheria in the larynx was regarded as the most fatal symptom, 12 dying out of 18. As for the actual and final cause of death, it is set down as follows: septicæmia alone, 2; eclampsia, 2; cardiac paralysis, 2; asphyxia (carbonic acid poisoning), 10; asthenia alone, 1. Sequelæ occurred in 11 cases, or in about one-tenth of all. In 10 there was paralysis of the pharynx, in 7 of the larynx, in 6 of the limbs, in 2 of the heart; in 2 there were rheumatic pains.

The temperature was found to be highest at the outset, averaging from 102° to 103° F., the highest being 106½° F. After the second day it fell, averaging from normal to slightly above that point. Treatment was directed towards three points: 1. To cause suppuration in the membrane. 2. To thoroughly disinfect the air-passages. 3. To overcome the marked asthenia by which all cases of this disease are characterized. To accomplish the first, the *vapor of water* (120°-130° F.) was inhaled for 15 to 20 minutes every hour. This remedy is believed by the author to be thoroughly satisfactory, giving very great relief from distress, and actually saving five out of the six cases where the membrane was in the larynx. Experience of the disease in his own person enables the writer to emphasize this treatment forcibly. In disinfection he used salicylic or carbolic acid; the strength was as great as the patient could bear, and it was combined with the vapor of the steam-spray. As restoratives, food in the shape of milk and beef-tea was used; as tonics, milk-punch, quinia, or iron, and quinia citrate.—*New York Med. Jour.*, June, 1878.

THE DOCTRINE OF ACETONÆMIA.—The suddenness of death which sometimes occurs in cases of diabetes has led to a variety of surmises as to the cause. The patient, without premonitory symptoms, suddenly becomes drowsy and dull, stupor deepens to coma, and coma to death. The post-mortem examination sheds no light upon the cause of death. By some it has been thought that this new condition is one of uræmia; others again have found the excretion of sugar suddenly diminished, and have accordingly attributed the new symptoms to retention of sugar in the blood. Lerch, in 1853, from the smell of the breath, urine, etc., was led to surmise that the symptoms were due to acetone, a volatile ethereal liquid allied to chloroform in its properties. Petters tested the theory by fractional distillation of the urine from a patient who died of diabetic coma; he thus obtained a clear, highly refracting, inflammable liquid, having the boiling-point of acetone and giving the same reactions—neutral, browning with sulphuric acid, yielding a brown precipitate with caustic potash, and not reducing oxide of silver. The blood also yielded the same material. Others have since confirmed these views. Recently Dr. Foster has found acetone in fresh diabetic urine, and has also proved that acetone is capable of producing the post-mortem appearances found in diabetic coma, viz.: a thick fluid state of the blood which presents a milky opacity, and he thinks that he has prevented death in diabetic coma by the administration of agents which have the power of arresting fermentation. This array of facts would seem to place the whole matter upon a satisfactory basis, but still some reasonable doubts may be thrown upon even this explanation. In the first place, one observer compares the smell of the breath, urine, etc., to chloroform, another to beer, another to vinegar. Then again, the rapid transformation of unstable compounds out of the body, or in it after death, make it problematical whether such a change did not occur, the blood perhaps containing some substance capable of yielding acetone, but not acetone itself. This is the view taken by Rupstein. He found in the fresh urine a peculiar acid—diacetic acid. On boiling, or after standing for a considerable time, the urine ceased to give the reaction of this acid and acquired the odor of acetone. This acid will break up, by assuming two molecules of water, into acetone, alcohol, and carbonic acid.

Again in reference to the question, Are the effects of acetone in the blood similar to those observed in diabetic coma? Kussmaul has found that its effect upon the system is much the same as alcohol. He has been in the habit of prescribing acetone as a remedy for dyspnœa, and has given a drachm or a drachm and a half daily without any ill effect. In fact it required a drachm to produce any toxic effect in a rabbit. To produce acetonæmia, therefore, a very large amount must be generated in the system before the poisonous effects are produced. While, therefore, there is strong evidence that diabetic coma is, in many cases at least, accompanied by, and probably due to the formation in the blood of substances of the ethyl-acetic series, sometimes capable of yielding acetone; there is not sufficient evidence that the symptoms are due to the presence of acetone in the blood to justify the name of "acetonæmia."—*The Lancet*, May 11, 1878.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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HOTEL PHYSICIANS AND RURAL PRACTITIONERS.

It would appear that our friends in Saratoga are still exercised concerning the propriety of certain outside physicians coming to that place to practise medicine, and have taken measures accordingly for placing their protests upon record. The danger in all such proceedings is that of giving an undue weight to individual interests, when in reality the intention is to discuss general principles. If any of the gentlemen referred to as coming from the city, or elsewhere, actually resort to any unfair means for obtaining practice, they are clearly subjects for discipline. Unless this can be proven, however, the case falls to the ground, as a medical man has the right to practise his profession anywhere and everywhere he pleases. One physician does not own a community more than another, and honorable competition for business is open to all.

Of course the question that presents itself in this connection has reference to what should be considered "questionable measures in seeking practice." If the latter are merely meant to apply to doings of the medical gentlemen who choose to live for a while at a watering-place, or take up their quarters at any summer resort, and practise their profession, no reasonable objection can be urged against the proceeding. These are no more than ordinary means of obtaining business, which are sanctioned everywhere. While we must admit that the rural practitioner can hardly look upon this division of labor in a strictly impartial manner, he has really no remedy. If the medical gentlemen from abroad have extensive reputations, so much the worse for the chances of the regular resident of the place. This, in fact, explains in a very reasonable manner why certain physicians always have enough to do, no matter where they may go. But these remarks do not apply to the hotel physician, ordinarily so-called, as the latter personage holds his position by special favor of the proprietor, and by a business understanding is enabled almost to force his services upon transient guests. The fact of his occupying such a position seems to imply that every one connected with the hotel shall do his or her best to throw practice in his way. Such proceedings are naturally and justly looked upon by the rural practitioners in the neighborhood as a professional monopoly. It is radically wrong, decidedly unprofessional, and positively dishonorable for any medical man to lend his countenance to such practices. We regret to say that too many transient hotel physicians are of this class. As regards those gentlemen, however, who temporarily reside at the hotels in Saratoga, we are well assured that no complaint on such a score has any foundation in fact, and that the professional competition, as far as they are concerned, is in every respect fair, and honorable. In the absence of any direct proof to the contrary in the protest of the local society, we may perhaps conjecture that some new cause for disagreement other than that which existed two years since has manifested itself. At all events, on general principles, our remarks cannot be considered out of place, and admit of a wide range of application.

THE MAINE MEDICAL ASSOCIATION—STATE BOARDS OF HEALTH—MALPRACTICE SUITS.

The reports of the different State societies, which we have from time to time presented to our readers, show a very commendable state of activity in these organizations, and prove the character and value of the work for which the members are capable. It is but justice in this connection to refer to the doings of the Maine Medical Association to prove that its members are also alive to their duties, and are fully impressed with the character of the questions which should interest a State organization. As an illustration, we may refer to the advocacy of a State Board of Health, and the means which have been, and are still to be, taken to that end. The time is evidently ripe for any such movement, not only in Maine, but in all other States that have no provision for such a board. It is gratifying to notice that such States have not lost sight of their opportunities to present their claims for organized sanitary supervision. If we are able to judge of the signs of the times in connection with the recent establishment of the Government Bureau at Washington, it will not be long before every State will be suitably cared for, and be part of a grand scheme of sanitary protection throughout the whole country. Partaking somewhat of the method adopted by the New Jersey and Connecticut State Societies, a very praiseworthy effort is made to collate the experiences of members concerning leading medical topics of discussion. The report on the etiology of typhoid is an instance in point.

The prevention of prostitution came up for discussion from two very different standpoints, showing how widely competent men may differ upon matters

of expediency. The radical measures advocated by Dr. French are scarcely such as would commend themselves to the ordinary legislator, although the latter may freely admit the premises which are laid down by the author in question.

Passing over the strictly medical papers, we take occasion to refer, in conclusion, to a feature which should be engrafted upon the proceedings of similar organizations throughout the country, and that is, the presentation of reports of suits of malpractice occurring throughout the State. Dr. Sanger has done a good service in this particular, and by his statistics gives force to suggestions for the protection of the practitioner. His showing is quite remarkable, and his recommendations are eminently reasonable.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

THE necessary proceeding for legalizing the meeting of the State Society in January last took place at the recent meeting of that organization held in Albany. We presume that there will now be no more discussion, at least for some time to come, regarding a change of programme. There are a great many objections that may from an individual standpoint be urged against meeting at almost any time of the year, but we have a right to presume that the majority are now satisfied, and there leave the matter.

ABUSE OF MEDICAL CHARITIES.

IT is a gratifying state of affairs to notice that there is a desire on the part of boards of trustees and the medical press throughout the country to remedy the abuse of medical charity, so prevalent in our large cities. The recent action which the authorities of the New York Dispensary have taken in this matter looks very promising towards a reform. The physicians of the Massachusetts General Hospital have also made a very careful and suggestive study of the proportions of the evil in Boston. During the month of November last an experienced person was employed by the trustees of the Hospital to examine into the case of each applicant, with the following result:

Whole number of visits, 386; number of deserving poor, 254; number giving wrong addresses, 79; number able to pay, 53. Now, allowing one-half of those who gave wrong addresses to have done so from misunderstanding, etc., it yet leaves us 93 applicants out of 386, or about one-quarter, who were able to pay. We presume that even this is a very small proportion of those who cheat the poor physician of his legitimate fee.

DR. NATHAN BOZEMAN, of this city, gave a reception, June 28th, at his residence, to Prof. S. D. Gross, of Philadelphia, and Dr. T. G. Richardson (ex-President of the American Medical Association), of New Orleans. A number of distinguished medical gentlemen were present, and the evening was a very enjoyable one.

Reports of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Annual Meeting, held at Congress Hall, Albany, June 18, 1878.

DR. A. L. SAUNDERS, VICE-PRESIDENT, IN THE CHAIR.

THE MEETING OF JANUARY LEGALIZED.

THE Society was called to order at 10.15 A.M., the President, A. L. Saunders, in the chair.

The following were in attendance: *Delegates*, Thos. Beckett, H. S. Case, F. C. Curtis, Albany Co.; Wm. L. Cooper, Rensselaer Co.; Stephen G. De LaMater, Schenectady Co.; John Vedder, Ulster Co. *Permanent Members*, J. L. Babcock, J. S. Bailey, Wm. H. Bailey, R. B. Bontecou, M. H. Burton, Wm. L. Cooper, S. H. Freeman, James C. Hutchinson, Joseph Lewi, Henry March, Levi Moore, Jacob S. Mosher, J. N. Northrop, C. H. Porter, C. A. Robertson, A. L. Saunders, Wm. M. Smith, R. H. Ward.

The Secretary, in accordance with the resolutions passed at the January meeting, presented the proceedings of that meeting.

On motion of DR. WM. H. BAILEY, the reading of these proceedings in full was dispensed with.

The Secretary then read the resolutions passed at that meeting relative to the business to be transacted at this meeting, which were to the effect that the proceedings of the January meeting be adopted as the proceedings of this, the regular annual meeting of 1878.

The President thereupon declared the minutes and transactions of the meeting of January 15, 16, and 17, 1878, to be in fact and intention the minutes and transactions of this, the legal annual meeting for 1878. On motion of the Secretary, the declaration of the President was unanimously sustained as the declaration of this meeting.

It was then moved by the Secretary, and the motion was seconded, that in accordance with the notice given by resolution at the January meeting, the time of holding the annual meeting be changed to the first Tuesday in February. The motion was carried, all present voting affirmatively.

The Secretary then announced that the President-elect (Dr. Roosa) had appointed Dr. J. W. S. Gouley, of New York, Censor of the Southern District, in place of E. R. Peaslee, deceased, and that he had also appointed Dr. J. V. Kendall, of Baldwinsville, delegate to the Maine Medical Association, no person having been selected as delegate at the January meeting.

On motion of the Secretary, it was voted that these appointments of Dr. Roosa be confirmed by the Society.

DR. WM. H. BAILEY moved that the thanks of this Society be extended to Mr. Adam Blake, proprietor of Congress Hall, for the cheerful readiness with which he provided an agreeable room for this meeting of the Society. The motion was unanimously carried. The minutes of the meeting were then read and approved.

A motion having been made to adjourn, the President said: "Before putting this motion, allow me to congratulate the Society on its success in clearing away the muddle which for the last year has hung about the legality of its action, and to express the confident belief that, this encumbrance happily removed, the Society will attain to still greater heights of prosperity and usefulness."

Dr. Wm. H. Bailey requested the indulgence of the Society, and moved that the thanks of this Society be presented to Dr. A. L. Saunders for the faithfulness with which he has presided over the Society in its struggle to remove this incubus of illegality, both at the January meeting and at this meeting.

Dr. James S. Bailey, while seconding the motion, desired to state that he had had good reason to believe that the main reason that led Dr. Jenkins to decline the Presidency of this Society was the depressed state of his health, which had become still further impaired, so as to render it necessary for him to relinquish his business, and seek recuperation abroad.

The motion was then put by the Secretary, and unanimously carried.

On motion, the Society then adjourned.

Wm. Manlius Smith, *Secretary.*

MAINE MEDICAL ASSOCIATION.

Twenty-sixth Annual Meeting, held at Portland, Maine, June 11th, 12th, and 13th.

Dr. T. H. Jewett, of South Berwick, President, in the Chair.

(Special report for The Medical Record.)

First Day—Tuesday, June 11th.

The twenty-sixth annual meeting of this Association was held in Portland, on Tuesday, Wednesday, and Thursday, June 11th, 12th, and 13th. There was a large attendance from all parts of the State, and also delegates from the State Societies of New Hampshire, Vermont, and Connecticut. The principal part of the morning session was occupied by routine business. The only paper presented was a report on otology by Dr. Holt, of Portland, which was a practical discussion of suppurative inflammation of the middle ear.

PRESIDENT'S ADDRESS.

At the opening of the afternoon session, the President, Dr. T. H. Jewett, of South Berwick, delivered his address. He took up the subjects of medical jurisprudence, hygiene, and preventive medicine, and the improvements in therapeutics. Under the first head he discussed the lack of proper education, in this branch, on the part of students, and the present unsatisfactory methods of obtaining expert testimony in the courts. He believed that a "system of medico-legal officials, specially trained as experts or arbitrators, should be established, attested as capable by competent judges, to examine and give impartial and unbiased quasi-official opinions for the benefit of the courts." Under the second head of his discourse, the great need of an efficient State Board of Health was forcibly presented, and the Association urged to continue its efforts to secure such an organization. He then proceeded to discuss some of the improvements in therapeutics, and to indicate in what direction its future progress was to proceed.

ETIOLOGY OF TYPHOID FEVER.

Dr. Stone, of Deering, read a paper on the "Etiology of Typhoid Fever." The paper was principally a discussion of the question whether it depends upon a specific poison, or may be originated *de novo* by the decomposition of organic materials, vegetable as well as animal, in conjunction with certain favoring conditions which are not well known. He claimed that the country practitioners were in a position much more favorable to determine this question, because they could better know the history of their patients, and the probability of their exposure to the disease. He felt sure that he had seen many cases which could not have come in contact with the disease, or been subjected to the poison of a typhoid patient. As evidence that the disease might be caused by vegetable decomposition, he gave an interesting description of an outbreak of fever which followed the opening of a muck-bed near a small village. The disease recurred every year at the latter part of summer for seven years, more than one hundred cases occurring within a radius of half a mile, and not more than six or seven houses escaping. At the end of this time the muck-bed was drained and allowed to be covered with a heavy growth of flags, and the disease disappeared.

In the discussion on the paper, it seemed to be the opinion of a majority of the country practitioners speaking on the subject, that the theory of a specific poison could not be maintained unless it was assumed that the vitality of the poison could be continued for an indefinite period.

MECHANICAL TREATMENT OF STERILITY.

Dr. Gordon, of Portland, presented an abstract of a paper on the "Mechanical Treatment of Sterility," with a history of cases illustrating the modes in which the various deformities of the uterus causing that condition might be overcome, particularly arguing in favor of mild measures persistently carried out, rather than surgical procedures.

THE ERADICATION OF SYPHILIS AND CRIME.

Dr. G. F. French, of Portland, read a paper on "The Eradication of Syphilis and Crime by the Extirpation in that Class of the Procreative Power." Passing in review the latest facts and statistics relative to the prevalence of syphilis, he believed this disease is on the increase. Adopting Prof. Gross' views regarding the essential identity of scrofula and syphilis, as modified by transmission through several generations, he alluded to the connection between scrofula and tubercle, gave some appalling statistics of infantile mortality due to syphilitic taint, and affirmed that syphilis was the "*fons et origo*" of human deterioration. Criminal propensities are as hereditary as disease, as illustrated by the family history of the "Jukes;" and since confirmed criminals, as a rule, are a diseased, degenerate stock, it behooves society to prevent them from propagating both their diseases and their criminal propensities. This can be effected by making the extirpation of the procreative power, with imprisonment for life, a penalty for capital offences. He advocated bringing the venereal, like other contagious diseases, under the jurisdiction of the State Board of Health, according to the suggestion of J. Marion Sims.

A syphilitic prostitute should be spayed, lest she become, like Margaret in the Jukes, the "mother of harlots." Syphilis, which is already a ground for divorce, ought to be a legal impediment to marriage, and it should be a crime, punishable with mutilation, for any syphilitic to cohabit. And the time will come when it will be considered an outrage on society for any one to marry who has any form of severe transmissible disease.

Second Day—Wednesday, June 12th.

All of the morning and part of the afternoon session were spent in the discussion of a question of

ethics connected with the expulsion of a member, to the exclusion of the regular business.

MALPRACTICE SUITS.

Dr. SANGER, of Bangor, read a paper on "Malpractice Suits." It contained the statistics of all the malpractice suits occurring in Maine, during the remembrance of the present generation, which could be obtained, seventy in number. Of these seventy, six paid from $100 to $350, rather than stand trial. Of the remaining sixty-four, in nine cases only was a verdict obtained by the plaintiff. The total amount sued for was $423,640. The total amount paid on the verdicts for damages was about $6,500, in sums varying from $103 to $2,000. It was estimated that it cost the surgeons to defend these suits $50,000, and the courts as much more. As for the plaintiffs, only seven out of the whole number were able to pay taxable costs, and very many of them were drunken and worthless persons. As some protection against these unjustifiable attacks, it was urged that we should have a law compelling the plaintiff to give bonds for taxable costs in case of failure to establish a case.

A committee was appointed last year to present this matter to the Legislature, but they reported failure. Another committee was chosen to present the matter again to the next Legislature.

Dr. L. W. PENDLETON read a paper on "Transmitted Tendencies." The subject was discussed in its physical, mental, and moral relations to the individual, and as to its more general effects upon the race.

ANNUAL ORATION.

The evening session was devoted to listening to the annual oration by Dr. F. H. Gerrish, of Portland. The subject of the oration was "The Duties of the Medical Profession concerning Prostitution and its Allied Vices." The argument was that the only proper way to treat the social evil is to remove the causes on which it depends, and it was maintained that a lack of physiological and moral education is the chief of these. The prevalent ignorance respecting sexual physiology and hygiene results in vicious indulgences which are productive of the most baneful effects on the health of the people. Physicians, better than any others, can instruct the community on these subjects, and, by so doing, may accomplish in time the overthrow of prostitution.

THIRD DAY—THURSDAY, JUNE 13TH.

Dr. F. C. THAYER, of Waterville, reported a case of extensive compound comminuted fracture of the skull. Recovery.

Dr. G. E. BRICKETT, of Augusta, reported a case of amputation of the thigh, done according to Lister's method, which healed without suppuration; also a case of chronic inversion of the uterus and two cases of ovariotomy.

STATE BOARD OF HEALTH.

The Committee for the Establishment of a State Board of Health reported that much had been done during the year to enlighten and quicken the popular mind in sanitary matters by means of petitions, circulars, and lectures, and much assistance in the same direction had been given by the newspapers. Their failure before the Legislature was due, he thought, to economical reasons, rather than any opposition to the measure, and they were very sanguine of success another year. The same committee was continued.

VAGINAL EXAMINATIONS IN THREATENED PUERPERAL FEVER.

Dr. G. F. FRENCH read a paper "On the Need of a Digito-vaginal Examination in Threatened Puerperal Fever, or after any Sudden Ill Turn following Parturition." A retroflexion of the uterus occurring a week after confinement simulated the invasion of puerperal fever, the rectification of the misplacement immediately aborting the symptoms. The case was complicated with a severe *laceration of the cervix*, which was completely healed in six weeks, without surgical procedure, by frequent vaginal injections of hot water, as recommended by Dr. Jacobi, of New York.

OFFICERS FOR THE ENSUING YEAR.

The following are the officers for the ensuing year: *President*, M. C. Wedgwood, Lewiston. *Vice-Presidents*, A. J. Billings, Freedom; J. A. Donnovan, Lewiston. *Treasurer*, A. S. Thayer, Portland. *Recording Secretary*, Chas. O. Hunt, Portland. *Corresponding Secretary*, S. H. Weeks, Portland. *Board of Censors*, F. H. Gerrish, Portland; O. A. Horr, Lewiston; L. W. Pendleton, Belfast; A. J. Fuller, Bath; D. L. Lamson, Fryeburg

The next meeting is to be held in Portland, the second Tuesday in June, 1879.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 8, 1878.

Dr. J. C. PETERS, PRESIDENT, IN THE CHAIR.

VENTRICULAR HEMORRHAGE AND APOPLECTIC NEURO-RETINITIS.

Dr. AMIDON presented a specimen of ventricular hemorrhage associated with apoplectic neuro-retinitis, and gave the following history of the case:

The patient was an inmate of the service of Dr. Wm. H. Draper, in the New York Hospital. He led a temperate life, had years ago sore throat, sore eyes, and osteocopic pains, worse at night. Three years ago had cystitis, and has had œdema of the feet for years. Has for three months been complaining of numbness on the right side, more particularly in the right hand. He has also had twitchings of right side of the face. March 31st. 9 A.M., was in usual health. 2.30 P.M., fell from his chair unconscious, and was soon after admitted to the hospital. 3 P.M., completely unconscious and relaxed; pulse 98, respiration 54, temperature subnormal. 4.15 P.M., pulse 86, respiration 28. Urine found to be loaded with albumen and vesical epithelium, but contained no renal elements. The eyes were examined opthalmoscopically; eyes half open, pupils widely dilated and irresponsive to light. Diffuse neuro-retinitis was seen in both eyes, and a large, fresh retinal hemorrhage in the right. 5.10 P.M., died, never having regained consciousness.

A few minutes after death the eyes were again examined. The media were perfectly clear. In the left eye was seen a diffuse neuro-retinitis. The vessels were tortuous, seeming to dip in and out of the retina, giving them a broken appearance. There was an old hemorrhagic extravasation on the macula, which had become pigmented; there was also a small hemorrhage above the disc, and small punctate hemorrhages along the course of the vessels. The outline of the nerve was effaced; the inner side of the retina was free from degenerative deposit, and apparently normal.

In right eye were seen two large, fresh extravasations

of blood, one overlapping the disc. There were also diffused and streaked hemorrhages elsewhere. In both eyes the arteries were small and veins large. During the post-mortem observation of the fundus, which occupied about half an hour, the large hemorrhages spread very much and coalesced.

A post-mortem examination of the head revealed hemorrhage in the cavity, and softening and laceration of the walls of both lateral ventricles. A small triangular clot was found in the fourth ventricle. On removing the eyes, retinal hemorrhages were found as diagnosed. The large, fresh hemorrhage was almost all fluid, and flowed out with the vitreous, thus showing it to be superficial, *i. e.*, just under the limiting membrane. The existence of diffuse neuro-retinitis was well shown by the opacity of the retinæ and fatty degeneration of the retinal cells.

DR. SEGUIN alluded to the coincidence of hemorrage of the retina and brain, referring to the statement of Charcot, that the true pathology of cerebral hemorrhage was due to a peculiar degeneration of the arteries, shown not only in the vessels of the retina, but in those of other parts of the body.

ACUTE CATARRHAL PNEUMONIA (DOUBLE)—HYDROTHORAX—HYPERTROPHOUS DILATATION OF HEART—VALVULAR ENDOCARDITIS (CHRONIC)—PERFORATION OF POSTERIOR LEAFLET OF AORTIC VALVES—HYDROPERICARDIUM — CIRRHOTIC AND FATTY LIVER — CHRONIC PARENCHYMATOUS NEPHRITIS.

DR. BEVERLEY ROBINSON presented specimens of the above, with the following abstract: J. L., married, laborer, thirty-seven years of age, born in Ireland, was admitted to Charity Hospital, April 15, 1878. Patient had an attack of acute rheumatism seven years ago, from which he entirely recovered. Since that time until July, 1877, he enjoyed good health. At that period he began to suffer from painful and frequent micturition, brought on doubtless by an attack of gonorrhœa which he had three months before; patient has never had pain in his loins; his habits are intemperate. On admission, patient was extremely anæmic and presented signs of general anasarca, which commenced two weeks before. The respirations were labored and exaggerated upon the left side of the chest posteriorly; there was a systolic cardiac murmur at the apex, the heart-beats being feeble, but regular.

Urine.—Sp. gravity 1012; contains granular casts, a moderate amount of albumen, some blood-corpuscles, bladder-epithelium, and triple phosphates. Patient was placed upon tonic treatment and jaborandi (fl. extract) in half-drachm doses *pro re nata*. Until April 27th he was doing well. On that day he had a severe chill, followed by elevation of temperature (102°–105¼°), frequent respirations, and rapid pulse. Signs of catarrhal pneumonia of both bases became evident; the heart's action was violent, and a murmur was detected with the first sound at the base (aortic stenosis).

In spite of the free use of stimulants, most nourishing diet, moderate doses of quinine, and the repeated use of dry cups locally, patient gradually failed, and died on May 2d, at 6 P.M.

The autopsy was made by Dr. Spencer, with the results as indicated at the beginning of this history. The diagnosis prior to death had been complete and exact in nearly every particular except the condition of the aortic valves, which was as follows: "leaflets show chronic endocarditis; they are thickened, roughened, and irregular over their free surface, and covered by a new deposit of fibrin. Posterior leaflet is perforated, the opening being about the size of a three-cent silver piece. The margins of this opening are irregular. It appears to be the result of an ulcerative process."

DR. HEITZMANN presented an unique specimen, consisting of a benign intra-ocular tumor. There was no trace of retina, choroid, lens, or anything else save the sclerotic. Even this latter was exceedingly thin in different places, the result of encroachments of the growth. The tumor was a myxoma and was supposed to have originated in the vitreous humor.

CYLINDRICAL-CELLED SARCOMA OF RECTUM—EXTIRPATION BY VOLKMANN'S METHOD.

DR. KEYES presented a cylindrical-celled epithelioma and a portion of the rectum removed by Volkmann's method. The patient was a lady of middle age, married, the mother of several children. She had enjoyed exceptionally good health up to two years before the operation, but during the latter period had suffered from symptoms which she had referred to the stomach, uterus, and finally to the bowels. Her disorders had been treated under the general name of malaria, with varying effect as to the relief of symptoms. Finally she came under the care of Dr. Keyes, with Dr. Van Buren in consultation, and an ulcerated cauliflower-like growth upon a hard base was recognized, completely encircling the rectum, commencing at about two and one-half inches from the verge of the anus and extending upward one inch. The tumor was movable.

An attempt was made to remove this mass by ligature. Its base all around the gut was enclosed in a series of loops, accurately placed by transfixing the healthy tissues of the rectum, starting below, passing underneath, and coming out above the indurated portion.

In ten days all the ligatures had separated, bringing away the tumor. In a month a relapse was found to have occurred, and to be extending rapidly at one portion of the cicatrix. Extirpation of a portion of the rectum including the tumor was therefore determined upon.

The sphincter was cut posteriorly, and all the tissues up to the tip of the coccyx, the incision extending about one and one-half inch up the gut. Here a circular cut was made through all the tissues of the rectum, and the latter dissected out all around to a point considerably above the tumor.

The vagina was not adherent to the cicatrix. The peritoneum was pushed off the gut in front and not opened. Posteriorly a hardened mass of glands and connective tissue were found in the hollow of the sacrum, attached to the rectum. This was dissected from the gut, pulled down, and finally cut off at a point where the tissues seemed healthy. This piece measured over four inches, and the gut appeared to be separated posteriorly as far as the promontory of the sacrum. In fact, by measurement, the gut was bared posteriorly to a height of more than ten inches. The circular cut above the sphincter was at one and one-half inches from the verge of the anus; two inches of gut had been included in the first ligatures, three more were taken away by this operation, making six and one-half, and the piece of hardened connective tissue extended more than four inches farther up. The peritoneum was not opened, but torn off and pushed aside.

Drainage-tubes and strands of horse-hair were put in on each side, and two irrigating tubes arranged to run in drops were inserted, connected by a double stop-cock with a fountain-syringe. These were all sutured into place, the drainage-tubes being brought

not out of the wound, but out of holes especially punched for them through the integument, near the anus. The gut was brought down and united all around with catgut, all bleeding points had been ligated with the same material, the operation had been performed under a spray of thymol in water, one part in the thousand, and constant irrigation was kept up during three and a half days with the same solution.

Irrigation was rendered easy without wetting the patient, by the employment of a very ingenious device invented by Mrs. M. Bradley, of Morrisania, called the invalid drawers. It resembles the Eureka diaper, shuts in all the pelvis and thighs in rubber, has a perforated horse-shoe shaped inflated cushion beneath, through which leads a funnel-shaped rubber prolongation and a tube which has to be carried through the mattress into a suitable vessel beneath the bed. The mattress may be sewed up after the drawers can be dispensed with.

Irrigation was very simple by the aid of this apparatus. The fountain-syringe was hung to a chandelier at the foot of the bed, and the rubber tube carrying the thymol solution was trained under the bed, up through the perforation made in the mattress for the invalid drawers, and by its two droppers into the wound. The disinfecting solution trickled unceasingly through the wound for four nights and three days, and was only then discontinued because the bowels moved freely of their own accord and irrigation was no longer considered necessary. The patient and her bed were kept perfectly dry through all this period.

Morphine was used freely, and a milk diet maintained. There was no peritonitis whatsoever, but considerable flatulency was complained of, due, it seemed, to the presence of a sponge which had been left in the vagina for the purpose of effecting pressure, but which really interfered with the discharge of the accumulating gases, and tended to cause the upper segment of the gut to be pulled away from the anus. To this mistake Dr. Keyes ascribed the failure of prompt union over the posterior and lateral portions of the wound. The front part healed with very little separation of the edges of the mucous surfaces. The gases escaped freely the moment the sponge was removed.

The catheter was introduced regularly. No accident occurred. The temperature ran up to 102½° within twenty-four hours after the operation (due probably to shock and ether), but fell at once to about 100° and remained there until the seventh day, when it rapidly rose to above 102°. The next morning menstruation appeared (being a week too early), and the temperature fell to 99°.

On the twenty-first day the patient took a long ride in the park, and at the end of four weeks left town for the summer, passing formed stools and having fair control of the bowels, unless their contents were liquid. At the date of her leaving the city there was still some granulating surface unhealed. The levatores acted powerfully and seemed to substitute the sphincter. The latter did not act well, owing to the splice which was put into it by the posterior incision, which healed by granulation. There was no return of the disease, and only a moderate cicatricial tightness at the line along which the gut had been incised. It is not yet time to decide how perfect the patient's control over the bowel will be, but Dr. Keyes thought that it promised well.

The specimen showed a linear cicatrix encircling the gut, and at one portion of it a broken-down ulcerated surface an inch and a half long, an inch wide, and an inch thick, very hard beneath.

MEMBRANOUS COLITIS.

Dr. Putnam-Jacobi exhibited shreds of membrane which had been discharged per rectum for a long period, and as often as once daily, but never at a less than two days. The patient was an hysterical female. For a number of months she suffered no inconvenience to her general health, but lately she became debilitated, and suffered from various symptoms of dyspepsia. The passage of these shreds of membrane was never attended with pain, nor was any pain developed on pressure over the region of the colon. The condition of debility suggested the waste of albuminous material. A microscopical examination of the membrane corresponded in its results with those obtained by Whitehead and Da Costa; that is, this membrane did not show any fibrillation, nor did it respond to the chemical tests for fibrine. On the contrary, it coagulated in compact masses on the addition of alcohol, very nearly dissolved in a solution of chloride of sodium, and dissolved completely in dilute nitric acid. In a word, it corresponded in appearance and by tests to mucine. The principle of treatment which suggested itself was the checking of the waste of albuminous fluids. The patient was accordingly placed upon a milk diet with iron, five drops of the tincture every hour for five days. She was kept upon an exclusively milk diet for a fortnight. A week after this treatment was commenced the discharge of membranes ceased, and at the end of a month she expressed herself as feeling better than she had for three years before. At the time of reporting the case the patient had not passed any more membranes for three months, and was suffering merely from slight dyspepsia.

Dr. Peters stated that he had seen a case accidentally cured by a teaspoonful dose of tincture of iodine, which had been administered by a nurse.

Dr. Seguin referred to a case in which every remedy failed until pregnancy occurred, since which time the disease had not returned.

Dr. Carpenter had a case in which the symptoms occurred at intervals for over two years. When the patient came under his care he recommended that she should lie in bed. The discharge ceased in one week, and she remained perfectly well.

Dr. Briddon alluded to a case which occurred to him twenty years ago, in which large sheets of membrane were discharged. The condition was associated with aneurism of the arch of the aorta, but disappeared without treatment.

Dr. Loomis knew of one case of the kind that entirely recovered by simple change of residence.

INTRA-CAPSULAR FRACTURE OF FEMUR.

Dr. L. A. Stimson exhibited an intra-capsular fracture of the femur, removed from a man sixty-five years of age, who died as the result of that and other injuries sustained by a fall down-stairs. He arose unassisted after the accident, and walked several yards. On examination, the left thigh presented half an inch of shortening, was slightly abducted, and foot slightly everted.

At the autopsy a large amount of ecchymosis was found in the substance of the vastus externus, with commencing suppuration. The fracture was at the junction of the head and neck, was almost transverse, and the capsule was not open at any point. Upon the inferior surface the periosteum was preserved.

BONY ANCHYLOSIS OF THE ELBOW-JOINT.

Dr. Stimson also presented an anchylosed elbow

removed by operation at the Presbyterian Hospital, May 1st. The patient was a lady 27 years old, who gave the following history. At the age of 12 she began to suffer from inflammatory rheumatism, which lasted for three years, involving many of the articulations and the bowels very severely. At the end of the three years there was complete loss of motion in both elbows, both knees, and the four middle phalangeal articulations of both hands. The right wrist possessed flexion and extension, but no rotation; the left wrist a slight amount of rotation, but no flexion; right ankle stiffened, hips and shoulders free. Harsh, bony crepitus in the wrists and right ankles, carpal bones somewhat thickened. This condition has persisted for twelve years, notwithstanding frequent efforts to restore mobility by forced flexion and extension without the aid of anæsthesia. She came under my care in January last. After many attempts with partial, but always temporary success, to break up some of the minor articulations, two attempts were made, under ether, to straighten the right knee; both failed absolutely, but the joint was slightly painful for twenty-four hours after each attempt. Hot baths and frictions were used upon both elbows, and as much force as the patient could bear applied daily to them in the direction of flexion. Both joints became gradually more and more sensitive to these efforts, and as this sensitiveness was rather more marked in the right than in the left elbow, it was determined to break up that one under ether. This was easily accomplished, the tissues parting with a loud snap, and the joint becoming immediately freely movable without crepitus. The fact that the motion was in the joint, and that no bone had been broken, was verified by several surgeons. Notwithstanding my efforts to oppose it, the range of motion decreased steadily until it became almost inappreciable. Ether was again administered, and the joint again broken up. This time there was no loud snap, but a gradual tearing; the range of motion was not quite as great as after the first rupture, and it was less free, the parts moving stiffly upon each other. Two weeks afterwards the joint had again become stiff, and another repetition of the attempt proved quite fruitless.

Excision of the left elbow was then resorted to, by the sub-capsulo-peritoneal method and the median longitudinal incision. The specimen consists of the condyles of the humerus, and the portions of the radius and ulna lying above the base of the coronoid process of the latter. The humerus and ulna are united by complete bony fusion, without any alteration in the form of either bone. The union between the humerus and radius is by a mass of fibrous bands one-fourth of an inch long, and a bony rim of new formation one-eighth of an inch high and thick occupies the upper edge of the corresponding articular surface of the humerus. A thin osteophyte one-fourth of an inch high and one-eighth of an inch wide juts directly outward from the external edge of the same surface, and is in contact with a similar growth upon the edge of the head of the radius. (Since the presentation of the specimen a sagittal section has been made through the humerus and ulna, and shows the bony fusion to have been complete, not a trace of the articular line remaining.)

In view of the fact that most authorities deny that articular rheumatism is ever followed by bony anchylosis, Dr. Stimson asked for an expression of the opinion of the Society concerning the nature of the original disease.

He suggested as a possible explanation that the ulna and humerus were originally united by fibrous bands similar to those now uniting the humerus and radius, the result of an effusion into the joint during an attack of articular rheumatism. As a result of the close application of the two articular surfaces to each other, these bands were short, and the prolonged immobility favored their transformation into bone.

Drs. Briddon, Putnam-Jacobi and Loomis were of the opinion that anchylosis did occur in arthritis deformans, and Dr. Heineman related a case in point occurring in Roosevelt Hospital, where every joint of the body was anchylosed from the toes to the buttocks.

Dr. Seguin remarked that inasmuch as in Dr. Stimson's case the position of the olecranon was displaced, the idea of some previous injury suggested itself.

Correspondence.

ON THE TREATMENT OF DYSPEPSIA—CHRONIC GASTRIC CATARRH.

To the Editor of The Medical Record.

Sir:—I am induced to offer the following remarks by the perusal of the very able paper on this subject from the pen of Dr. Neftel, which appeared in No. 396 of The Medical Record. My motive is twofold: First, to contribute my mite in corroboration of all Dr. Neftel claims for the treatment; second, to refer briefly to a method which the doctor includes in a general summary of remedies that had been vainly tried in his cases, viz.: "The Electrical Bath."

My attention was first called to the subject by an article of Dr. C. Fürstner,* and shortly after by a communication from Dr. Neftel himself,† which were simultaneously republished in the *Allgem. Med. Centralzeitung*, No. 42, 1876. Since reading these articles, a little over two years ago, I have employed the method suggested, viz.: *faradization of the stomach*, in quite a number of suitable cases, and, it gives me pleasure to state, with results unvaryingly the most gratifying. In carrying out the treatment, however, I did not by any means adhere strictly to the details as laid down in either of the articles above referred to, but adapted my proceedings rather to the main object sought to be obtained by the faradic treatment, to wit: contractions of the muscular coat of the stomach. To accomplish this efficiently, it is necessary only to be familiar with the anatomy of the parts, and the mode of action of the remedy under discussion. I found it indeed impossible to carry out any stereotyped plan, not only because the electro-contractility of different portions of the abdomen varies considerably in different individuals, but also because we find—more especially in persons suffering from trouble of the alimentary canal—points of tenderness that forbid the application to them of a current of sufficient tension to cause muscular contractions. I will refrain from wearying the reader with cases, of which those given by Dr. N. are so typical that I should be guilty of tautology in adding to them. I may be permitted to state, however, that all, or almost all, of my patients were elderly persons.

With reference to the "Electrical Bath," I wish simply to protest against its inclusion among "inefficient remedies," and I feel assured that, were Dr. N. per-

* Ueber die Anwendung des Inductionsstromes bei gewissen Formen der Magenerweiterung (Berl. kl. Wochenschrift, No. 11, 1876).

† Die Behandlung der Magenectasien beim Chronischen Magencatarrh (Centralbl. f. d. med. Wissensch., No. 21, 1876).

sonally familiar with my method of administering the bath, he would not have thus unqualifiedly included it. I claim for it—with full susceptibility of proof—that by its means the stomach can be made to contract quite as well as by local methods, while its effects on any coexisting constipation are more pronounced and complete. The general tonic effect of the bath, moreover, forms no insignificant adjuvant in an affection that is always attended with general debility and loss of functional powers.

GEO. M. SCHWEIG, M.D.
20 W. 21ST STREET.

ON THE HYPODERMIC INJECTION OF DIALYZED IRON.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—In a previous issue of THE MEDICAL RECORD, June 15, 1878, Dr. W. M. Kemp reports a case of "Abscess following the hypodermic injection of dialyzed iron." As I have recently used the same preparation in a similar manner, but without producing any accident or unpleasant symptoms, I thought it proper to report two cases of anæmia which lately came under my own observation. It is now a month since I gave the last injection to the first case, and about two weeks to the other one. At no time have they caused or produced any bad results. The only objection I can find with it is, that it causes at the time a great deal of pain, followed by soreness and tenderness, also swelling and redness; and on two occasions the iron seemed to remain unabsorbed, as shown by a black or rather bluish discoloration, which still remains, giving to the parts the appearance as though they had been tattooed; also a hard feeling to the touch, but no soreness. The pain and swelling, however, have soon subsided by the constant application to the parts of cold water. In one case I gave seven hypodermic injections of Wyeth's dialyzed iron, at first in doses of ℥ x., diluted, then ℥ xv., and lastly ℥ xx. undiluted. In the other case I have given ten injections consecutively, one each day, in the same doses as above.

1ST CASE.—Mrs. M. C., aged 35. Had been subject to menorrhagia for a long time, so much so that she was obliged to keep in bed for weeks at a time. She now put herself under my care, and after a few months of proper treatment she got better; but naturally became very anæmic from the loss of blood. Having used some of the preparations of iron, combined with other tonics, with very little success, I decided to try the hypodermic injection of Wyeth's dialyzed iron, which I did, as first recommended by Prof. Da Costa, and in doses as above stated, with the most happy results.

2D CASE.—This is a young married woman, who has been under my care for several months, suffering with hysterical epilepsy, the result of some uterine and ovarian trouble, which, unfortunately, cannot be cured. She also suffers with severe uterine neuralgia, so that frequently I am compelled to give her, hypodermically, very large doses of Magendie's solution; even then she is not able to get a good night's rest. All this has produced anæmia and a general debility of her whole system.

Some time since I gave her, for ten days, the dialyzed iron hypodermically, with some apparent benefit, and probably I will use it again in her case, if indicated. It is now two weeks since I gave her the last injection. I must state here that this patient requested me, when I stopped, to continue giving her these injections, notwithstanding it caused for a time a great deal of pain, but she said they made her feel better and stronger. This patient has been seen by Dr. Shaw and Prof. Skene, of this city, in consultation with me.

In conclusion, I would add that the profession is greatly under obligation to Prof. Da Costa for calling attention to this new and most promising way of treating rebellious and severe cases of anæmia. As to Dr. Kemp, I trust the report of these two cases will encourage him sufficiently to try again the hypodermic injection of dialyzed iron.

J. J. LAMADRID, M.D.
258 FRANKLIN AVENUE, BROOKLYN.

MEMBRANOUS TONSILLITIS.

TO THE EDITOR OF THE MEDICAL RECORD.

A FEW days since I attended a patient with what I diagnosed to be diphtheria; but taking into consideration the history of the case, and its favorable course, I sometimes doubt the accuracy of the diagnosis. The patient was a boy four years old, and when I was requested to see him, his father said his son had a white patch in his throat. This I found to be true. Besides, I could not detach it by ordinary force. It was about the size of a twenty-five cent piece, very white and hard, and located on the right tonsil. The patient had fever, particularly at night, and he got along so well that he was able to be up through the day.

For the fever I used sedative doses of cinchonidia, for a local remedy chlo. of potash, and four drops of the mur. tr. iron every three hours internally, because it is endorsed so highly for diphtheria. In addition he got whiskey freely after the first day or two.

As there had been no diphtheria in town for some months, I asked Dr. Hanna to see the case with me, as I might be mistaken in its diagnosis. He confirmed my views as to the disease. However, the child made such a rapid recovery that the question arose in my mind, is an exudative or croupous inflammation of the tonsil necessarily diphtheria? There was no laryngitis because the voice was clear. I discovered no membrane anywhere except on the tonsil, and that came off in about seven days.

The description of tonsillitis which I have read in the text-books refers to that variety which frequently ends in suppuration; but there is no membrane present, except that which often accompanies pseudo-membranous croup or diphtheria; but my patient's larynx was sound through the course of the disease.

Now, we have croupous and catarrhal pneumonia, croupous and catarrhal bronchitis, croupous and catarrhal laryngitis, and I see no reason why we may not have croupous and catarrhal tonsillitis. Though so far as I know the books do not refer to exudative tonsillitis, the history of my patient induces me to think he had what I shall term membranous tonsillitis, but exudative or croupous tonsillitis perhaps would be equally as descriptive.

The mucous membrane of the air-passages is subject to two forms of inflammation, namely, croupous and catarrhal, and I believe the same thing occurs in the tonsil. However, it seems that writers speak of membranous inflammation about the tonsil only in connection with membranous laryngitis or diphtheria, and not as a separate disease. If it be established that there is such a thing as distinct and independent exudative inflammation of the tonsil, then that will be another point against the identity of croup and diphtheria.

JOHN L. COOK, M.D.
HENDERSON, KY., June 7, 1878.

ON THE USE OF OPIUM IN PARTURITION.

To the Editor of The Medical Record.

Sir:—In reading the discussion which took place at the Academy of Medicine, on May 2d, I was especially interested in the views advanced relative to the use of morphine in labor, and felt it to be my duty to contribute the results of my experience (although it is that of a "country doctor").

From the time it was more especially urged upon the profession, to wit: when the distinction was made between the contraction of the circular and longitudinal muscles, I have invariably and unhesitatingly administered it when the indications seemed to demand it, and I believe, from a large experience, that the theory that it exerts an injurious influence upon the fœtus is without foundation.

In its use I have invariably, when not prevented by convulsions or other good reasons, pursued the course of Dr. Caro, that is, introduce it by the stomach rather than hypodermically, and I cannot believe, from the most careful observation of its effects, that it exercises the slightest injurious influence upon the uterine contents.

With such an experience, backed up by so good a reason for its use as is that advanced by Dr. Carson, to wit: "The immense value of opium in obstetric practice would prevent us from materially modifying our method, even in the face of the *facts* (italics mine) presented by those who believed there was danger of producing deleterious effects upon the child," I especially desire, at this time, to raise a voice of warning against the *indiscriminate* use of morphia hypodermically, whether it be in the practice of midwifery, medicine, or surgery.

Undoubtedly, when administered in the latter manner, as it was recommended by the originator, it is of invaluable aid to us, but the practice pursued by a large number of the profession, when called to a case of disease in which there is more or less pain, of taking out the hypodermic syringe *and making the morphia solution then and there, extemporaneously*, is to me reprehensible as injurious, and often *destructive* to the patient. I know whereof I affirm; not, thank heaven! from personal experience, but from positive observation. I only beg that those medical gentlemen who are so fond of doing business in that manner will publish their *fatal results* from even *much smaller* doses, administered in that manner, than they claim to inject.

D. Colvin, M.D.

Clyde, N. Y.

A MISQUOTATION FROM HORACE.

To the Editor of The Medical Record.

Sir:—I take the liberty of calling your attention to some inaccuracies of singular interest in the quotation from Horace with which Prof. Barker begins his otherwise admirable tribute to the memory of the late Dr. Peaslee, that has recently been published, and I suppose widely distributed. These inaccuracies can be most readily understood by placing the quotation and the original side by side. The quotation reads as follows:

"*Pallida mors æquo pulsat pede*
Pauperum tabernas, regumque turres.
Vitæ summa brevès, spem non vetat inchoare longam."

On referring to the works of Horace, one finds that it is taken from the Odes, Book I., Carm. IV., verse 4. The original reads as follows:

"*Pallida Mors æquo pulsat pede pauperum tabernas*
Regumque turres. O beate Sesti,
Vitæ summa brevis spem nos vetat inchoare longam."

Or, omitting the last half of the second line for the sake of embracing only the words intended to be quoted, the following becomes the text, which also should have been that of the quotation itself:

"*Pallida Mors æquo pulsat pede pauperum tabernas*
Regumque turres . . . . . ,
Vitæ summa brevis spem nos vetat inchoare longam."

Now, the inaccuracies in question consist: 1, in substituting a nameless metre, which the poet did not use, for the elegant Archilochian metre which he did use (vide *Lord Lytton's Horace*, p. 57); 2, in substituting the adverb *non* for the pronoun *nos*, in the third line, whereby the meaning of the passage is utterly perverted into something which the poet did not intend to say; and, 3, in some errors of orthography and punctuation which, however, are of minor importance, inasmuch as they can be seen at a glance, on simply inspecting the quotation, without taking the trouble to compare it with the original. What I object to in the inaccuracies above-mentioned is, mainly, that they pervert the original in respect to its *form*, on the one hand, and its *sense*, on the other. Surely, if a quotation from a great writer, and especially from a great poet, is worth making at all, whether for the embellishment of a discourse or any other purpose, it should, at least, be accurate in these essential or vital points.

Horath Vindex.

New York, June 22d.

THE TEACHING OF NERVOUS DISEASES IN VIENNA.

(The following letter was addressed by the writer to a medical friend and teacher in this city, by whose permission it is published.—Ed.)

Dear Doctor—Your kind letter came to hand as a prompt answer to mine, which reminds me that I must not longer delay my reply. I sent to you some days ago a copy of the University Calendar, but fear that it will not give you much of an idea of the manner in which the clinics are conducted here.

In regard to your questions about certain courses, I can say, that Benedikt's course is a clinical one, conducted at the Poliklinik (he has but one course, and not two, as described in the calendar), one hour and a half every day, except Sunday. The whole affair reminds me very much of the Manhattan Hospital. The room is about the same size, and the number of patients about the same; perhaps a few more than we had at the Manhattan. He has an assistant, who keeps a record of the cases and who writes prescriptions, and another who uses the batteries, while Prof. B. himself makes all the examinations of the patients, together with the treatment after his diagnoses, which latter he never fails to make; he also often speaks at length of the affection illustrated by the case before him. His hearers number at the outside not more than five or six, who take seats about his table and examine the patients, and ask questions in a very social way. From what I have seen of his clinics, I cannot say that I am satisfied with them, as far as he is concerned; he often spends a great deal of time on what seems to me unnecessary preliminaries, and at others, hurries

over what seem to me important cases. His diagnoses are to me often of the most surprising character, and not seldom unwarrantable, from my standpoint. Of late he has been interested in cranial mensuration, and explained to us one day his complete method. It took him nearly two hours to measure one head. The phrenological "bumps," in number, are nothing compared with the cranial measurements which he takes. I found more use for trigonometry than I have had since my school-days. His method may be a valuable one for the determination of the cranial form and capacity, but it is certainly far from being a very practical one.

Of the class of cases which he has at his clinic, I can say that they average about the same as at the Manhattan, perhaps not as many paralytics, and more cases that are somewhat outside his specialty, as articular affections and common forms of acute diseases. Prof. B. puts great stress upon galvanization of the sympathetic in a great variety of diseases, particularly in neuralgia of the fifth pair. I have not been able to follow out enough of his cases to determine for myself the result, but his report is certainly very flattering. I thought sometimes, while I was at the Manhattan, that we used to slight the patients as to the time employed in applying electricity, but the brief manner with which they dispose of them here astonished me, and make me doubt the efficacy of their treatment. At Prof. Fieber's course the same hurried method is adopted, and I was unable to learn from him anything that I had not already been taught under your direction. Dr. Fieber's is purely a course on electro-therapeutics, his hearers number four or five, and his patients are brought in to illustrate the particular form of application as he wishes, while Benedikt takes cases as they come. Rosenthal has a similar course, which is somewhat better. With the latter and with Fieber the students make the applications once or twice themselves to learn the methods.

Obersteiner's course was a systematic course of lectures before four students, myself included, going over the ground of the histology of the nervous system, normal and pathological, well illustrated by plates and a great number of fine microscopical specimens. The physiological part was combined with the anatomical as different parts of the nervous system were taken up, and was illustrated by a number of experiments on different animals, such as frogs, pigeons, hens, rabbits, guinea-pigs, etc., which, of course, brought us into the pathological division. Many of his experiments were of a common character, but some were very good, such as the Hitzig experiments upon the cortex, etc. You can readily see that it was an extensive ground, but, considering the time, he succeeded very well, and I found it a good review of the subject. Dr. Obersteiner is a young man, but seems to have an extensive knowledge of the literature of the subjects on which he spoke, and his work showed that he was not deficient in the practical part of the same. He is very careful, and conservative in his views as well.

Usually his animals were operated upon before the lecture, when it was possible, in order to save time, so that we did not have much actual experience in making or assisting in the operations.

At Prof. Meynert's clinic there are usually about ten or fifteen students, not more. He has taken the subjects up in pretty regular order, and has brought his cases to illustrate. He has gone over the different forms of mental diseases, epilepsies, chorea, hysteria, spinal diseases, to some extent, and is now upon forensic medication, and has also nearly finished the anatomical and physiological lectures. These lectures he attempts to illustrate by crayon sketches on a board; they are not quite as rapidly produced as are Nast's, but are about as humoristic. In short, he is not an artist, and does better when he brings his microscopes into use.

W. R. B.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 23 to June 29, 1878.

TAYLOR, M. K., Capt. and Asst. Surgeon. S. O. 128, C. S., Dept. of Texas, amended to enable him to avail himself of his leave on June 20, 1878. S. O. 128, Dept. of Texas, June 19, 1878.

CORSON, J. K., Capt. and Asst. Surgeon. Assigned to temporary duty at Fort Whipple, A. T., S. O. 64, Dept. of Arizona, June 13, 1878.

AINSWORTH, F. C, 1st Lieut. and Asst. Surgeon. To accompany Co. "B," 8th Infantry, from Fort Whipple to San Francisco, and upon completion of this duty return to proper station. S. O. 64, C. S., Dept. of Arizona.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 29, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.
June 22, 1878....	0	3	73	1	47	39	0
" 29, 1878....	0	2	74	3	23	31	0

NEW YORK DISPENSARY.—The report of this institution is at hand, and shows that while the funds have been administered with liberality and a spirit of true benevolence, economy has been practised with the best results. The ten-cent system with venereal patients has been cheerfully responded to, and during 1877 $1,007.05 was received from this source, including $241.80 for bottles. During the past year 43,628 persons received medical attendance, and the trustees make the pertinent inquiry, in view of the prevalent abuse of medical charity, how many of these came properly under the head of dispensary patients. We congratulate the patrons of this institution on the public spirit of its trustees in boldly facing this question, and we look hopefully to the future when the trustees of all charitable medical institutions will strongly co-operate with each other in this matter, which is pregnant with great good for the deserving poor.

NORTH-EASTERN DISPENSARY OF NEW YORK.—The sixteenth annual report shows that during 1877, 21,488 patients were treated, who received 57,021 prescriptions. The total amount expended was $2.648.65, which makes an average of twelve and a half cents for each patient. Considerable saving has been effected to the institution by the use of sulphate of cin-

chonidia for all cases in which sulphate of quinine was formerly used. The former drug can be obtained at a comparatively low figure, and the physicians find it equal to the more expensive article. The plan of requiring those applicants *who are able* to pay ten cents for a ticket, entitling them to one month's treatment, is said to give more satisfaction to the patient than the old method. We view with pleasure as in the previous instance this co-operation between managers of charitable medical institutions and the recipients, to dispense, to the best advantage for all, the funds advanced by the benevolent for the sick poor.

HOTEL PHYSICIANS.—The Saratoga County Medical Society, at their annual session, on the 4th of June inst., unanimously adopted the following preamble and resolution:

Whereas, There are certain members of the regular profession now in good standing in the State Medical Society, as well as in county societies, who annually visit Saratoga Springs for the purpose of practising medicine, and by their questionable measures in seeking practice to the detriment of local resident physicians; therefore, be it

Resolved, That we, as members of the County Medical Society, do condemn the practice above mentioned, as contrary to the spirit of our code of ethics.

Resolved, That a copy of the foregoing preamble and resolution be sent to THE MEDICAL RECORD, of New York, the *Medical Times* and *Medical and Surgical Reporter*, of Philadelphia, and that a copy be sent to Dr. T. B. Reynolds, delegate to the American Medical Association, with the request that he will see that it is brought to the notice of the society above mentioned.

C. C. BEDELL, M.D.,
Secretary.

HYDROPHOBIA AND SEXUAL EXCITEMENT.—As to the experimental production of rabies—its generation *de novo*—experimental veterinary science, and the pathological observations of competent veterinarians in Europe, furnish some facts worth recording. Fleming reports the case of a cross-bred spaniel, five and a half months old, which had never left its mother, never went out, and was naturally very quiet. When the mother became in rut, the young dog, excited by the odor, became extremely agitated, and at last refused food. Three days later, being asleep, it wakened suddenly, and flew savagely at an attendant. When taken to the infirmary of an eminent veterinary surgeon in Paris, rabies was diagnosed. The animal refused all food for the next three days; on the fourth, rabietic paralysis supervened; on the fifth, it died. Another case of what Fleming styles spontaneous rabies, occurring under similar conditions, is noted in a late number of the *Veterinary Journal*, London. In a box adjoining the kennel of a male was placed a female in rut, the effluvia from which caused the most ardent veneric excitation. For fifteen days—placed in such tantalizing proximity—the unfortunate animal manifested the most extreme agitation, and finally went furiously mad. Similar results have been produced experimentally by confining males near a female in rut, particularly by M. Toppolin, who describes them as so constant and decisive as to leave no room for doubt as to the agency of intense sexual or other excitation in producing rabietic madness. It is not an unfamilar fact that rabies have been experimentally produced in the inferior animals by inoculating them with man's saliva, as well as with the saliva of dogs not rabid. A guinea-pig thus inoculated became subject to violent convulsions, which could be excited at pleasure by dashing a little water at him. A rabietic pig, which lay torpid under the severest beating, could be excited to convulsions at pleasure by flirting a piece of white paper in its face.

A NEW UTERINE SUPPORT.—Dr. O. E. Herrick, of Greenville, Michigan, thus describes a new uterine support which he has devised: "It consists of a soft rubber ring with a silver wire stem, and is attached to a web belt by elastic cords crossing each other through the protruding end of the silver wire stem, making it both easy to wear and quite convenient to apply. The stem, as stated above, is a small, solid silver wire, attached to the ring on either side, and drawn tight enough to imbed the wire into the rubber ring deep enough so that it cannot irritate the uterine neck; it then comes down in two arms to about one-half the length of the vagina, when the two wires are brought together and twisted, thus forming the stem with a little loop of the wire left at the bottom for the elastic cords to pass through. This stem is no larger around than a small knitting needle, and does not inconvenience the patient a particle, neither does it in any way interfere with the necessities of nature. In fact I have several patients who have worn it for two months without being removed. After this statement perhaps some one will ask if it is not uncleanly to wear it so long without being removed? We think not, when we remember that there is no cap to catch the secretions, and that the vagina can be daily washed with the syringe without removing the instrument.

I have used this simple apparatus for about five years, and have found that it is just as useful in cases of retro- or anteflexion, retro- or anteversion as in simple prolapse, and for this reason. The soft rubber ring fits up into the cul-de-sac of Douglas posteriorly and close around the neck of the uterus anteriorly, thus completely encircling the uterine neck; and being made of soft rubber, it clings by its elasticity sufficiently tight to prevent any of the above-named displacements; and should the uterus be heavy enough to tip over and take the ring with it, from laxity of the vaginal walls, the silver wire stem would *still* hold it in place. Its introduction is as easy as a simple rubber ring. Put the index finger against one side of the ring and push it up in front of finger until it reaches the cul-de-sac, then push the other side up in front of the neck leaving the wire stem to itself until the ring is in its place, when it can be easily straightened if it has become bent.

Another item of importance is its cost. Instead of costing from eight to sixteen dollars, as most instruments of the kind do, it will not cost over as many shillings."

LEAD-POISONING BY FLOUR.—Dr. Alford details the particulars of a local outbreak of lead-poisoning, which occurred in one part of the Taunton Rural Sanitary District, but in houses far apart. He analyzed the water, cider, preserved fruits, etc., but without detecting any lead. On careful inquiry, however, he found that the families affected had one thing in common, viz.: they all had their flour from the same mill. An analysis of this flour showed the presence of lead, and an examination of the mill revealed the fact that the holes in the stones had been filled up with lead. The lead was removed, and the disease gradually disappeared. Some of the cases were of a very severe form. It appears, on further inquiry, that it is by no means an uncommon thing for the holes in mill-stones to be filled with lead, a fact which is worth remembering.

DR. SEGUIN'S LECTURES will be continued the latter part of the present month.

Original Lectures.

EXTIRPATIO RECTI (VOLKMANN) FOR CANCER, WITH CASES.

By W. H. VAN BUREN, M.D.,

PROF. SURGERY, BELLEVUE HOSPITAL MEDICAL COLLEGE, ETC.

The above designation, in common use by the Germans, will serve to distinguish the operation, remarkable for its thoroughness and for its details, rather than for originality in method, which is now on trial as a remedy for a disease usually regarded as incurable. It implies free and complete removal, by amputation or excision, of as much of the lower bowel as may be required to extirpate cancerous degeneration limited to this part. It is the proceeding advocated by the able surgeon whose name I have connected with it, as promising better results than any hitherto attained. The reports of success which he has given us in a recent paper,* backed by his sound surgical reputation, have induced me to advise the trial of this operation in several recent cases. I append notes of these cases as a contribution towards a better knowledge of the proceeding, simply as regards its feasibility and safety; for its value as a remedy, we must await results.

It is to be remembered that Lisfranc, who first popularized this operation in 1826, claims to have relieved six out of his nine cases. His imitators, according to Velpeau, hardly did as well; and the operation has met with scant favor in England and this country, where isolated cases are recorded at long intervals, which simply demonstrate its feasibility.

In Germany Prof. Schuh published, in 1868, some better results. Esmarch tells us that Billroth examined a woman of 58, from whom Schuh had removed a circular (*sic*) cancer four years before, and failed to find any evidences of a return of the disease.

The objections to the operation, heretofore, have been the difficulty of removing the *whole* disease without endangering the peritoneum, of which a wound has been regarded as mortal; the danger arising from bleeding, and the uncertainty as to its control; and the doubt as to subsequent ability to retain the fæces. To these may be added the feeling of general hopelessness of curing cancer by a measure which looks only to its local removal.

Schuh's improved success may be ascribed, in part, to the increased advantages he derived from *anæsthetics;* Volkmann attributes his own still better results to the additional advantages of improvements in drainage, and of *Listerizing* † with strict attention to details, both in operating and in subsequent treatment.

It may be of interest to give an abstract of Volkmann's views, and some of his results. He has seen three permanent cures by early removal of undoubted cancers of the rectum, and, in a number of cases, the return of the disease has been delayed for a length of time rarely, if ever, seen before in cancer—six, five, three years. One woman died eight years after operation, without *local* return, probably of cancer of the liver. In another case of total extirpation, eleven years ago, the patient has had two relapses—the disease having reappeared at the edges of the new anus—and she is now (1878) strong and active. These results justify his conclusion that the removal of cancer of the rectum is not merely a palliative operation; certainly, *if performed early*, the prognosis he regards as good. He considers cancer of the rectum to be less malignant, slower in returning after removal and in generalizing itself in the system, than cancer developed in other localities.

As to details in dressing, besides sewing drainage-tubes in the wound between the sutures which attach the healthy "stump" of the rectum to the edges of the external incision, he also practises *extra* drainage, by making a puncture beyond its edges on either side, and carrying catheters up to the extreme limit of the cavity from which the disease has been removed, always outside of the rectum. Through these he injects an antiseptic solution at intervals, or, still better, connects an irrigating apparatus with them, by which, for the first five days, or until danger is past, a constant small stream (regulated by a dropping-tube) is kept up through the space around the new rectum. If the peritoneal cavity is opened during the operation he at once substitutes salicylic acid for the carbolic, places a well-disinfected sponge against the opening, continues the operation, and, when the tumor has been removed, dilates the main wound with Sims's speculum, and closes the peritoneal opening with carbolized catgut sutures. In one case where he opened the Douglas cul-de-sac he had to use twelve sutures, and the patient recovered without a single symptom of peritonitis. Besides carbolic and salicylic acid he has recently employed thymol (for irrigation especially), as not being poisonous if absorbed.

By thus strictly carrying out details in drainage and in the use of antiseptic precautions, Volkmann believes that he avoids retention of poisonous fluids in the wound, and the setting up of "acute ichorous and purulent inflammation of the pelvic cellular tissue," which constitute the chief danger of these operations, by spreading, often in a few hours, to the neighborhood of the kidneys and diaphragm as retro-peritonitis and lymphangitis, and leading secondarily to peritonitis.

He does several different operations, according to the nature of the case: *e. g.*, cutting out a limited portion of the rectum, and also cutting out a section of the gut, and leaving the sphincter when it is free from disease; but he decidedly prefers early and total extirpation, including the sphincter, as being most likely to insure ultimate safety from return of the disease.

After the operation the chief difficulty is inability, under some circumstances, to retain the fæces; but even this is a less serious matter than the pain which attends obstruction, and the disease itself not unfrequently gives rise to incontinence. On the other hand, the operation promises entire ease of defecation and freedom from pain, which are likely to be lasting; for local return comes in the cicatrix at the edge of the skin, or else high up in the pelvis, or in the internal organs, especially the liver. Local return, with renewal of stenosis and pain, happens only when removal has been delayed too long and has not been carried high enough to reach certainly healthy bowel. If there is no prospect of accomplishing this, he declines to operate.

Case I.—Mrs. ——, a well-nourished and healthy-looking lady of middle age, who had been for some time complaining of vague pelvic uneasiness which had been attributed to the uterus, insisted so strongly that there was something wrong in the rectum, that Dr.

* Ueber den Mastdarmkrebs und die Exstirpatio recti in *Klinischer Vortrage*, No. 131 (Chirurgie, No. 42), March 13, 1878. I owe an early acquaintance with this paper to my friend Dr. L. A. Stimson, who kindly made for me an abstract of it in English.

† The Germans have invented a verb, *listern*, by which they avoid circumlocution when speaking of antiseptic dressings.

Keyes, early in March, asked me to examine her. I was rather surprised to discover a zone of lumpy thickening nearly surrounding the bowel at about two and a half inches from the anus. It was entirely movable on all sides, even towards the vaginal septum. I advised an operation, and consented to Dr. Keyes's proposition to attempt its removal by ligature, which was thoroughly accomplished, as far as we could judge, on the 10th of March, a tuck very nearly two inches in width being very completely tied off. The slough separated in ten days, and on the thirtieth day after the operation I again examined the patient. A sharp, thread-like linear cicatrix was distinctly prominent around the bowel, except at one point behind and to the right, where a characteristic nodular growth, apparently of recent formation, showed that the disease was still active. The character of this growth, which had been ascertained to be cylindrical epithelioma, and the promise of better success suggested by the paper of Volkmann which had just been received, seemed to me to justify a trial of extirpation, and this I advised. It was done on the 1st of May, under thymol spray, by Dr. Keyes. We decided to preserve the sphincter, and room was gained by a central incision from anus to coccyx for the thorough removal of a section comprising from two and a half to three inches of the gut. From the left side of the pelvis, near the median line, quite a mass of injected and thickened connective tissue, with several distinctly enlarged glands, was drawn down, apparently from between the layers of the meso-rectum, and after careful scrutiny removed. The bleeding was readily controlled by tying vessels as they were divided; and, as the levatores ani had been dissected away from the bowel, and the peritoneum also carefully detached from it for some little distance above, it was readily drawn down so that the entire freedom of the rectum from disease at the proposed point of section could be satisfactorily determined. The gut was then cut across with the scissors, and the edges of the stump sewed fast to the sphincter. With the tuck originally removed by ligature, it was computed that about five inches of the rectum had been taken away. Slender bundles of horse-hair to secure drainage were inserted between the sutures as they were applied, and outside the rectum, introduced through punctures of the skin, tubes were placed, on either side, for irrigation. A fountain-syringe suspended from a gas-fixture, with a dropping-tube inserted, was attached to the tubes, and the whole pelvis enveloped in an impermeable diaper (known as the "invalid drawers"), with a tube attachment carried through an opening in the mattress and sacking to a vessel beneath the bedstead to receive the drip. This diaper contrivance, invented by Mrs. Bradley for a paraplegic brother, answered admirably. The flow of a thymol solution (1–1,000) was kept up until the fourth day. There was no marked febrile reaction nor rise of temperature. Some plugging which had been inserted into the vagina prevented escape of gas from the bowel, and this proved a disadvantage, for the tension led to premature tearing out of the sutures, so that the stump of the rectum retracted somewhat, and the posterior incision also failed to unite. But the bowels acted with singular regularity, notwithstanding the opium, and the wound granulated so well that the patient, who had the services of excellent nurses, rode one and a half hours in the park on the twenty-first day, and was able to go to the country at the end of the fourth week. On the 12th of June she visited the office, and I recognized, on examination, that the wound was cicatrizing satisfactorily; about three-fourths of an inch within, the finger passed easily through a thread-like ring, marking the contracted end of the gut; beyond this, as far as the finger could reach, everything was soft and healthy. There was no perceptible action of the sphincter, the lack of which has thus far proved no serious inconvenience, as the bowels act kindly and regularly, and the simple dressings prevent incontinence. The action of the sphincter will probably improve when cicatrization is completed. The patient's general appearance is that of perfect health.

From this case two things, at least, were learned: first, to provide for free escape of flatus; second, that the absence or powerlessness of the sphincter is not necessarily a matter of such very great moment. For the next case, therefore, which shortly presented itself, an ingenious contrivance was employed by which the first indication was met; and, as for the second, we decided that it was better, for the patient's interest, to remove the sphincter entirely. The instrument for giving vent to flatus is an egg-shaped air "pessary" of caoutchouc—a thin, soft india-rubber bag with a flexible tube eight inches long, ending in a stop-cock, and traversed in its long diameter by an ordinary gum catheter of full size; the bag being air-tight, and distensible at will through the tube stop-cock. It is a modification of what is known as Guyon's substitute for the old *canule à chemise* for plugging the wound after lithotomy in case of hemorrhage, which I picked up recently in Paris, and it will make pressure in the rectum to any desired extent under similar circumstances of bleeding, and at the same time permit flatus to escape. It is obvious, also, that a certain degree of distention of the gut after extirpation diminishes the area outside, between it and the pelvic walls, which is to be filled up by granulation in the process of cure.

Case II.—Miss ——, 30, became aware some eighteen months ago of a protrusion after straining at stool. This returned from time to time, and was accompanied by some back-ache and a bloody discharge; it proved to be a polypoid growth, and was removed by her physician, Dr. John Burke, of Lexington avenue. After this for six or eight months she remained well, but the gradual return of the aching pain between the hips, with uneasiness in the rectum, and the reappearance of blood in the stools, led her again to seek advice, and Dr. Burke sent her to me on the 13th of May. I recognized the presence of several elevated patches with irregularly granulated surfaces, the largest towards the vagina, and nearly surrounding the rectum, at from an inch and a half to two inches and a half from the anus; the parts movable; no other evidence of disease; general condition good. Believing this to be an epithelioma, and apparently of slow growth, I advised extirpation, including the sphincter; and, Dr. Burke approving, this operation was done, under thymol spray, by Dr. Keyes, at my request, on May 20th.

By Lisfranc's method, with a circular incision around the anus, about three inches of the gut were separated from the surrounding parts, and amputated well above the disease, with very moderate bleeding. The edges of the remaining portion of the rectum were readily brought down and stitched to those of the external wound without any tension, by means of silver wire, with provision for drainage as in the last case, except for irrigation. This was omitted because nurses were not available to carry it out efficiently, and the following measures were substituted: a Napier's convolvulus catheter was lodged in the bladder; the perforated air-pessary already described was inserted into the rectum, and gently distended, so as to reduce the area of the surrounding extra-rectal cavity to a

minimum, and a mass of oakum applied over the wound, and covered in by carbolized gauze. At each dressing, under spray, the extra drainage tubes were injected with antiseptic solution, and the parts bathed with the same. The case did perfectly well; on the twelfth day she sat up, and on the 18th of June came to the office.

I found a perfect line of union of healthy mucous membrane with skin around the new anus, which presented a very natural appearance, with the slightest possible tendency to protrusion of the former. The forefinger nearly filled the opening, which could, of course, exert no power of squeezing it. Everything within felt healthy. The patient averred that she had no power to prevent the contents of her bowels from escaping, but on cross questioning, I found that she had experienced no mishap or inconvenience, in fact, whatever, since the day she first sat up. Every morning she has a natural sensation of desire, and a full, painless evacuation follows; after this she goes around as usual, protected only by a simple compress and napkin, and so far has had nothing to complain of. Undoubtedly, in case of diarrhœa there will be more trouble. Time will show if there is to be any aid from increasing power of the lowermost circular fibres of the bowel, a result which, it has been asserted, nature accomplishes in these cases. I advised the use of fine prepared oakum as a compress. Her general appearance had noticeably improved, and her expressions of gratitude were spontaneous and earnest.

The success as to the immediate result of the operation of the two cases I have detailed, induced my colleague, Dr. George A. Peters, to make a trial of the Volkmann method in a case which entered his service at the New York Hospital about this time, of which he has kindly placed the notes at my disposal.

Case III.—J. H——, 50, married; admitted May 18, 1878, under Dr. Peters. He is a pallid but well-nourished man, and has a warty, tubercular growth, extending about half an inch from the margin of the anus externally, and from one and a half to two and a half inches up into the bowel, and nearly surrounding it. There is an enlarged gland in the left groin. He gives a history of an operation for fistula sixteen years ago, and of a lump appearing afterwards, which same growth, as he believes, has only lately begun to give him trouble. The pain in defecation is now so severe as to require anodyne suppositories, and he demands an operation for its relief.

On May 26th the operation was done with all the antiseptic precautions, except the use of spray. The gut was readily brought down and amputated, well beyond the disease, and the edges of the stump sewed fast to those of the external circular wound. The bleeding was exceedingly moderate. Ample provision was made for drainage, and a tube placed in the rectum to give vent to gas. Finally, thymol solution was freely injected to wash out the wound, and carbolized gauze applied over a compress of oakum. The dressing was removed every four or five hours under spray. The patient did well until 8 o'clock P. M. on the fourth day, when a severe chill occurred, with a rise of temperature to 103.2°, followed by sweating. On the fifth day there was complaint of pain in the right elbow-joint, and at 10 o'clock P. M. another severe chill and sweat. On the sixth day the temperature rose to 105°, and death took place at 4 o'clock P. M. (May 31st).

Body examined at 12 o'clock M. next day. Rounded cicatrices on the legs noted by the pathologist. Drainage tubes in position near incision around anus, which looks healthy; mucous membrane everywhere stitched to integument; no union has taken place. Rectum for an inch above wound dark colored and somewhat softened; above this, healthy; no remains of disease; but little pus, and that not badly smelling. Right elbow-joint contained a small amount of pus; other joints healthy. Liver fatty; no abscesses. Lungs slightly œdematous; no abscesses to be found; half an ounce of reddish serum in each pleura, and recent adhesions at apex of left lung. Kidneys shrunken and irregular on surface, with several cysts, and many scars of old cysts; cortical portion markedly atrophied. Stomach shows the *état mamelonné* of chronic gastritis; extensive ecchymoses in duodenum. At the apex of the cavity of the left ventricle of the heart there is a smaller cavity, shut off from the rest of the ventricle by an adhesion of its walls, the size of a small horse-chestnut, which contains masses of fibrine, but no blood. The walls of this small cavity are hard, and muscular tissue is evidently absent.

Microscopical examination of the disease removed from the rectum shows colloid degeneration of a cylindrical epithelioma. Well-marked linear rows of micrococci were discovered between the muscular fibres in the heart; also in kidney.

These cases alone are sufficient to show that complete, even extensive extirpation of the lower end of the rectum can be effected with entire safety as far as hemorrhage is concerned. Volkmann says, on this point, that the gush of blood is often considerable, and requires the coolness of a surgeon accustomed to operations, but that he has never seen death from this cause. The 49 cases collected by Marchand,* bald as many of them are in point of detail, also demonstrate this: for whilst they include 11 deaths, none are ascribed to hemorrhage; and in only one, in which the patient died on the second day,—a case of Lisfranc's,—can the issue, I think, be attributed to this cause. Granting that some bad cases may remain unpublished, still the evidence is very strong as to the absence of serious danger from bleeding, to the practised surgeon.

As for the subsequent dangers of the operation, Marchand has one death in the third week from obstruction by a cancerous stricture situated higher up in the colon, and nine fatal results from pyæmia, peritonitis, and erysipelas. In his cases there were several in which the peritoneum was wounded; and there is no mention in any of them of the use of antiseptic precautions. This would make the mortality of the operation, without antiseptics, and without improved drainage, about 18 per cent., and it is to be added that a large majority of these were hospital cases.

The question of the necessity of absolute obedience in regard to antiseptic details is yet under judgment. Volkmann's submission is complete; he adopts all the rules which have been insisted on by Lister, even to the minutest details, and we must keep in view the fact that it is to this, as well as to his complete provisions for drainage, that he attributes the greater degree of success which he claims.

At the same time there is a large show of successful recoveries from the operation without antiseptics, in the collection of cases just mentioned, and several have occurred in our own country, *e.g.*, the cases of the late Alden March, Emmet, Weir, Briddon.

Dr. Keyes gives me notes of the following case, which occurred in his service at Bellevue Hospital:

J. E. ——, 50, entered April, 1877. Pale, thin, emaciated; complains of constant leakage of pus from the

* Étude sur l'extirpation de l'extrémité inférieure du rectum. Paris, 1878.

anus, with great pain, especially after stool, when there is also blood. He lacks the power of extrusion. History of "ulcerated hemorrhoids," which have been frequently cauterized, and partially snipped off. On examination, a hard mass was felt about two inches up the gut, attached posteriorly and encircling it for about three-quarters of its circumference. The mass was slightly pedunculated and cauliflower-like; it projected into the cavity of the bowel and involved the tissues between it and the sacrum, without being adherent to the latter. It was most bulky in the centre, where it was evidently ulcerated, and tapered off as it extended around on either side. Sphincter not involved. Operation for extirpation, May 1, 1877, by the *écraseur*. The mucous membrane was incised from the tumor downwards, and the incision carried externally, through the skin only, as far as the tip of the coccyx. A stout needle and ligature, carrying the wire of the *écraseur*, was then passed from near the tip of the coccyx upwards, outside of the gut, above the disease, then through the wall of the bowel and out at the anus, and the tissues thus included in the loop of wire were slowly divided. The diseased portion of the gut could now be drawn well down, and stout knitting-needles were transfixed through the healthy tissues beyond it, on each side, successively, the loop of the *écraseur* carried around above the needles, and thus the whole removed. A hard nodule, situated pretty high up posteriorly, gave a gritty sensation when pierced by the tenaculum, and was left, as it was decided to be a lymphatic gland undergoing calcification. No antiseptics were used, and little or no blood lost. The patient did well after the operation, and on June 8th presented the following condition: wound in the direction of coccyx still unhealed; slight tendency to contraction at line of division of gut, which will receive a bougie an inch in diameter. Relief from pain entire. Bowels act naturally. Returns to his home at New Kingston, N. Y.

Nov. 9, 1877, E. returns to report himself "cured." He has worked all summer on a farm, has gained twenty pounds, and looks fat and well. The incision towards coccyx has healed, leaving an angular sulcus through which the contents of the bowel tend to escape when fluid. He wears a small pad of oakum and a T bandage, and is very well satisfied. A thin knife-like circle, easily admitting the finger, occupies the site of the operation, and there all is sound; but above and behind, where the gland was left, there is a hard rounded tumor the size of an English walnut, attached solidly behind, but very slightly to the bowel.

On the 1st of February this was removed through a slightly curved incision four to five inches long, made with the knife of Paquelin's thermo-cautery, beside the coccyx, and extending up along the sacrum. The tumor was separated with the periosteum, from the surface of the sacrum, by the handle of the knife, and from the gut without opening into its cavity. In five weeks the wound was nearly closed, and the patient went home feeling well. He has not been heard from since.

Let us hope, whilst we are awaiting the final verdict as to its remedial value, that the feasibility and the promise of the operation of extirpation of the rectum for cancer will lead to its farther trial: for, as a means of relief in this most painful and otherwise absolutely mortal disease, it affords a chance to which the sufferer has a right, and which must be weighed, by the conscientious surgeon, in the same balance with colotomy.

DR. ST. JOHN, in closing, said that Dr. Hamilton seemed to lose sight entirely of the object of the argument of the paper, which had been distinctly stated to be to claim a legitimate place for the treatment by the gypsum apparatus, and not to establish a comparison between this method and any other. He asked if Dr. H. still adhered to his assertion "that with this apparatus the limb shortened as much as it was possible for it to shorten." (Dr. H. said that when he made that assertion he meant what he said, but he now desired to recall it.)

The cases adduced by Dr. H., treated by extension, showed remarkable results, but it was utterly unfair to ask that these cases treated under the personal supervision of Dr. H. should be compared with cases taken at random from general hospital statistics, for cases of extensive treatment taken in the latter way showed no such results as Dr. H. had brought forward. There was fortunately a set of cases in the statistics brought forward to-night which were treated under the personal supervision of one man, Dr. W. T. Bull, of Chambers Street Hospital, and these fifteen cases, which were all of the shaft of the femur, would bear comparison with the seventeen cases of fracture of the shaft adduced by Dr. H, the average shortening being the same, the maximum less, and there being no deformity. As for the extreme accuracy in measurements, brought forward by Dr. H. as showing the perfection aimed at in treating such cases, it was self-evident that the facts recently brought to light by Dr. Wright, of Brooklyn, and endorsed by Dr. H., as to a normal difference in the length of the two legs, rendered nugatory any such attempt at exactness, and overthrew all arguments for the superiority of any particular method which rested upon measurements to within the minute fraction of an inch.

Original Communications.

"THE PHYSICAL SIGNS OF INTERPLEURAL PATHOLOGICAL PROCESSES."

A REPLY TO DR. LEAMING'S PAPER.

By BEVERLEY ROBINSON, M.D.,

LECTURER UPON CLINICAL MEDICINE AT THE BELLEVUE HOSPITAL MEDICAL COLLEGE.

EVERY novel theory which is based upon experience and careful investigation merits consideration. When to these qualities is added the authority invested in it by a man of acknowledged ability and good faith, it is all the more worthy of rigid examination. And yet such opinions should in no manner conflict with our judgment in regard to its real value. Such is, in my belief, eminently true of Dr. Leaming's personal ideas with respect of auscultatory abnormal sounds of the pleuræ. Hitherto the very large majority, not to say the entire body, of medical practitioners have held mainly to the notions of auscultatory phenomena first promulgated by Laënnec, and have had no good reasons to doubt their accuracy in essential points. For them, mucous, subcrepitant, and crepitant râles were seated in the lung-structure, and became evident to an attentive observer in many different lesions of these organs. It was admitted by all that plastic conditions of the pleuræ produce friction sounds, and in certain instances these sounds approach very closely the characters of subcrepitant râles. But whilst this is true, many signs exist by which an accurate differential diagnosis can be established, and certainly no one has hitherto entertained the idea that all forms of

moist râles are seated rather in the pleuræ than in the lungs. To Dr. J. R. Leaming, therefore, belongs the honor of having first announced this conviction in a detailed and emphatic manner. On more than one occasion already he has stated publicly that our received opinions of auscultatory sounds are in many particulars incorrectly supported, and needed wise revision.

In the New York MEDICAL RECORD of May 25, 1878, he has insisted more strongly than ever upon the force and truth of his affirmations. Now, it appears to me only proper that some one of those who believe Dr. Leaming's views erroneous should make known his views, and should give the essential reasons upon which this difference of conviction rests.

In the second column of his late article Dr. Leaming writes as follows: "I have, in repeated instances, carefully noted and recorded the locality of râles, and their distinctive characteristics, for the purpose of testing them in relation to pathological conditions, to be revealed by autopsies. In no instance have I found them to disagree with the interpretation that their cause lay in an interpleural process." Now, surely Dr. Leaming does not wish to affirm that all the usual moist râles take origin in the pleuræ; or, if he does, may I not ask of him, with much reason, answers to the following familiar facts:

During the operation of thoracentesis, and so soon as a certain quantity of liquid has been withdrawn, the phenomena revealed by percussion and auscultation are modified. Resonance returns from above downwards, at the same time that the ear applied over the chest hears the sound of vesicular expansion manifest itself, at first at the apex of the lung in front and behind, and progressively in all the extent of the affected side. This pulmonary expansion is accompanied with mucous and subcrepitant râles. The above signs are at times heard before even the larger portion of the effusion is removed, and consequently before the plastic layers covering the lung and thoracic parietes can *possibly* rub against each other in any but a very limited space at the upper portion of the pleuræ.

How then shall we explain the crepitant and subcrepitant râles, heard under these circumstances, in any other manner than by pulmonary expansion and by the passage of air through the smaller bronchia and into the air-cells containing mucus?

Again, at multiple autopsies, as I have seen them in large general hospitals, though I have had frequent occasions to remark the existence of pleural adhesions in cases where subcrepitant râles have been distinctly heard but a short time previous to death over an extensive area of the lungs, very rarely, or at all, have I heard them without afterwards recognizing at the post-mortem examination more or less concomitant trouble of the bronchia or interstitial lung substance.

Usually the existence of pleural adhesions, except those of very recent date, almost of necessity implies the presence of congestion, induration, chronic pneumonia, or tuberculous and caseous deposits. How then can we be at all certain that the subcrepitant râles are occasioned *solely* by the pleural adhesions?

In order to prove that the adhesions are the efficient cause of the râles, and, indeed, the only one, it is essential to record cases in which the pulmonary structure is perfectly healthy except for the presence of the pleural adhesions, and this Dr. Leaming has not done in any one of the cases lately reported in the N. Y. MEDICAL RECORD. In Case I. there was "pneumonia of the whole of the right lung, which was consolidated." In Case 2, "left lung was found solid with pneumonia, except the lower part of the left lobe. The upper was in a state of gray hepatization, the middle red. The lower part was very much congested, but crepitated on pressure." In Case 3 no post-mortem was made, and it was merely inferred that the lung was consolidated, and, gratuitously also, that as this was the case "no air could enter it."

It is, of course, possible to have an entire lung consolidated to that degree as to be wholly impervious to air; but it will be readily admitted, I believe, that, generally speaking, the margins of even the most extensive consolidation are accompanied by the condition known as splenization. And if the lung tissue is altered to the extent of gray hepatization, we ordinarily have a tendency to softening in certain parts, which will fully explain the existence of more or less moist râles.

In Case 4, Dr. Delafield found "patches of pigmental fibrous tissue" in upper lobe of left lung, and "bands of new fibrous tissue and recent red hepatization in lower lobe."

In Case 5, "trachea and bronchia atrophied by pressure of tumor."

In Case 6 no post-mortem, but the existence of "soft tearing râles" is affirmed. In Case 7, lungs are stated by Dr. Abbe "not diseased," though extensive plastic adhesions covered the greater portion of both lungs. Can one recognize healthy lung tissue in this example?

Case 8, "lung filled with tubercles (caseous concretions), and two newly-formed cavities, one at the apex and the other at the middle of the upper lobe."

In Case 9, and last, "there is a dry tubercular or caseous deposit in upper part of right lung, and a good-sized cavity in upper part of the left."

These literal citations from Dr. Leaming's article will sufficiently show, I venture to affirm, the somewhat imperfect nature of the cases upon which Dr. L. rests a portion of his published belief. In the fourth column of Dr. Leaming's article (p. 402) the author asks the following question: "Has the generally-received opinion that all large, soft, moist râles are caused by bursting bubbles in the bronchi, ever been put to the test of careful experiment?"

The experiments of Spittal, Piorry, Petrequin, Fournet, Beau, Barth and Roger, Collongues, I believe were carefully made, and go to show that "in injecting into the bronchial liquids of different density, râles are produced with bubbles of different sizes, according to the volume of the bronchial ramifications." *

Further: "In order to facilitate the artificial reproduction of divers morbid murmurs of the respiration, Dr. Collongues constructed a bust in statuary pasteboard, in the cavity of which are placed tubes in india-rubber and bladders (put in communication with a bellows), and of which the lengths and dimensions had been exactly calculated. Five tubes produce each a special sound, which corresponds to the different murmurs, rude respiration, bronchial respiration, cavernous respiration, amphoric respiration, and normal respiration. The râles are obtained by modifications, of which the most important consist in fragments of tube called mouth-pieces. These mouth-pieces, moistened with saliva adapted to the bellows, produce the crepitant, the subcrepitant, mucous, sibilant and sonorous râles.

"By making two surfaces play upon each other, the one rough, the other smooth, the sounds of grazing and grating are produced. The divers mechanisms contained in the thorax correspond each to a special external opening, at the level of which the stethoscope

* Barth and Roger, Traité Pratique d'Auscultation, p. 42.

is applied in order to hear the sound that one wishes to produce."

The above apparatus, called "pneumoscope," was presented by its inventor to the members of the French Academy of Medicine, on April 26, 1864, and according to his statement, was seen and highly commended for the exactness and distinctive characters of the sounds produced by it, by Professors Trousseau, Barth, Blache, Beclard and others. As an experimental contrivance, therefore, it was assuredly very perfect.

In speaking of the theories given by different observers for the production of moist râles, Dr. Leaming writes as follows: "The tidal-air physiologists estimate it to be about one-tenth part of that of the lungs. So that after expiration there still remain nine-tenths occupying the true respiratory system. *This is the residual air.*"

In residual air Dr. Leaming includes evidently, both the *reserve air* and the *residual air*, properly speaking.

Now, the latter *always* remains in the lungs, unless these organs be torn in pieces, or wholly disintegrated, whereas the *reserve air* can at any time be expelled from the lungs by a forced effort of expiration, and this phenomenon is no doubt partially effected whenever the respirations are more than ordinarily energetic and rapid.

To quote from Dr. Leaming's words again: "When inspiration takes place the column of *in*-moving air passes in a body to about the third or fourth division of the bronchia, and can go no further, but mixes with the residual air, obeying the law of the diffusion of gases."

Is no mention to be made in the interchange constantly going on between the vitiated air of the air-cells and the relatively fresh air contained in the smaller bronchial tubes, of the *ciliated epithelium* which lines these tubes, and which here as in other regions of the body, where present, always produces currents of the fluid with which it is in contact?

Moreover, diffusion is undoubtedly aided by the elasticity of the lungs, which forces the gaseous contents out of the air-cells. Add to these forces a due consideration of the difference of densities in the inflowing and out-flowing air close to the "vesicles," and one recognizes a current of some considerable impetus even at the termination of the respiratory act. It seems to me, also, that the alternate movements of the chest-walls cause impulses which must tend to produce *current* effects even within the air-sacs. And notably should this be true in forms of disease implicating the lungs, for almost invariably then the *reserve air* is considerably encroached upon during the respiratory act for a greater or less lapse of time. The theories, therefore, in regard to the intrapulmonary production of moist râles are not "*impossible*," as Dr. Leaming would have us believe.

I cannot forbear to cite in this place the words of Skoda in regard to vesicular râle, who was certainly no mean antagonist of many views held by Laënnec, but who here cordially sustains him: "By this term I understand (in accordance with Andral and Laënnec) the râle which takes its origin in the finer bronchial tubes, and in the air-cells; we know that the râle arises there, from the fact of its bubbles being small, and of equal size; it indicates the presence of mucus, blood, or serum, etc., in the finer bronchial tubes and in the air-cells, and the entrance of air into the latter." *

At the termination of the article of Dr. Leaming I find the following (I believe) inadmissible propositions:

"1. Capillary bronchitis may or may not be accompanied by râles; *when so, they have their origin within the pleural cavity, and when there is no exudation there are no râles.*

"2. Fine subcrepitus may or may not accompany pulmonary œdema, *but only when there is exudation of some kind within the pleuræ.* The only true sign of pulmonary œdema is dulness under percussion. It is not distinguishable from pleuritic effusion, except when there are fine subcrepitant râles as well, *showing that the pleural surfaces are in contact and covered with lymph.*"

In my service of Charity Hospital within two years past I have had under my care more than one case of the first form of disease, and several of the second, in which autopsies showed the pleura of normal thickness and coloration, and yet fine subcrepitant râles were recognized by myself in the most positive manner shortly before death. Such cases, indeed, in my experience, are rather the rule than the exception.

In concluding these criticisms I feel called upon to ask, in Dr. Leaming's own words: "What diagnostic interpulmonary signs have we remaining, if all the râles and rhonci hitherto considered as evidence of pneumonia, bronchitis, œdema of the lung, tuberculosis, cavities, etc., are to be interpreted as of interpleural origin?"

To this question I would have no adequate reply to make were I inclined to admit the fact, but fortunately I am thoroughly convinced they should not as yet be thus *interpreted.*

* A Treatise of Auscultation and Percussion. London, 1853, p. 180.

HYDROCEPHALIC FŒTUS.—DECAPITATION.

A QUESTION IN DIAGNOSIS.

By W. E. FOREST, M.D.,

RESIDENT PHYSICIAN LYING-IN ASYLUM; ATTENDING PHYSICIAN NEW YORK DISPENSARY.

MARY E——, aged 26; second confinement. Taken in labor at 7 A.M.; attended by a midwife. At 12 M. the breech of the child was born, and the midwife then summoned a neighboring physician. At five and one-half P.M. I was summoned to the case. Found that the physician in attendance had deserted the case some time previously. On making an examination found the trunk of the child lying between the mother's thighs and connected to the head, still undelivered, only by a narrow strip of integument from the back of the neck. The perineum of the mother was lacerated to the second degree; the anterior wall of the vagina was prolapsed, and the vulva hot and swollen. Nevertheless the general condition of the woman was very good as far as pulse and temperature indicated. The hand, when passed far up into the vagina, detected the head of the child above the brim of the pelvis, the base of the skull presenting, the chin posterior and to the mother's right side. I failed to detect anything abnormal either in the maternal pelvis or the child's cranium, and hence no reason could be assigned for the existing state of affairs, namely, a decapitated trunk and a head undelivered.

Dr. E. L. Partridge and Dr. J. L. Morrill were invited to be present, and throughout the case I received valuable advice and assistance from these gentlemen.

As no obstacle to the application of the forceps was

discovered, we determined to apply them. The head was steadied by pressure made upon the mother's abdomen, and by traction upon the strip of integument extending from the child's trunk to the cranium, and without any serious difficulty the forceps were applied and locked. This operation threw the first ray of light upon the case.

In order to lock the forceps the handles had to be pushed far up, partly into the vagina; and, when locked, the extremities of the handles were very widely separated and could not be made to approximate each other.

From this feature it became evident that the head of the child between the blades was much larger than that of a normal child, so much so as to render any attempts at traction by the forceps entirely useless.

The forceps were therefore withdrawn, and the separation of the blades corresponding to the distance between the handles when the forceps were applied to the head, was measured.

This measurement gave seven inches as the diameter biparietal of the child's head. From this measurement it was at once surmised that we had to deal with a hydrocephalic head. The woman was profoundly anæsthetized and the hand carried up into the uterus. During the manipulations incident to the application of the forceps, the head, owing probably to its globular form, had rotated so that the child's occiput was nearly opposite the mother's sacrum, and now a distended fontanel could be reached. This proved to be the tempero-parietal suture of the left side. Thomas' perforator, the only suitable instrument at hand, was introduced, and a large amount of water, *eighty-two ounces by measurement*, drawn off.

The head was then quickly expelled by uterine contractions.

The head, after being filled with plaster-of-Paris and allowed to solidify, gave the following measurements:

Occipito frontal circumference, 22 inches; occipito-mental circumference, 21 inches; biparietal diameter, 7 inches.

The principal point of interest in the above case was the use of the forceps as an aid to diagnosis. The diagnosis of the hydrocephalic condition when the breech presents is very difficult. In these cases the labor, owing to the small size of the child's body, progresses easily and rapidly without giving any symptoms of the true condition of the child, until the base of the child's skull rests upon the brim of the pelvis. The condition of affairs then is somewhat as follows: the labor makes no further progress; the child's neck or even the shoulders are obstructing the vagina and interfering with a thorough examination; while the base of the child's cranium is resting upon the brim of the pelvis, and the diagnostic sign of hydrocephalus, the distended fontanels, are above the brim of the pelvis almost out of reach. In this state of affairs any aid to the diagnosis will be of great importance.

It has seemed to me that the forceps offers such an aid. When applied and locked (and they usually can be applied by persevering effort) the distance between the extremities of the handles of the instrument will indicate that a large body is between the blades of the forceps, and must tell pretty accurately the diameter of this body.

But one condition of the fœtus could give rise to this separation of the blades of the forceps, and that is the hydrocephalic condition. In those rare cases where tumors grow from the fœtal head, there is usually no obstacle to a spontaneous delivery, or at least to a delivery by moderate traction upon the fœtal head; at least they may furnish such indications of the probable condition of the fœtus that the duty of the accoucheur is not to wait vaguely hoping that nature unaided will solve the difficulty; but, both in the interest of the mother and possibly of the child, it will be the duty of the accoucheur to pass his hand into the uterus, if need be to the fundus, until a fontanel can be reached, the diagnosis verified, and the treatment immediately applied.

168 Spring Street.

Reports of Hospitals.

PRESBYTERIAN HOSPITAL, NEW YORK.

Contributions to Electrical Therapeutics.

By W. H. HAYNES, M.D.,

late house-physician.

In the Presbyterian Hospital of this city there exists a rule, by virtue of which the senior medical assistant is made electrician to the hospital, previously fitting himself for the position during his junior assistant term of service.

During the period I had charge of this service there were placed under my care, among others, the following cases, which, with their accompanying remarks, is thought will be of interest and stimulate research in this interesting, though budding, branch of our profession. Some of the matter contained herein will be found at variance with views set forth by some of the masters of this science. I merely state the facts, however, and, except in a few instances, they stand for themselves.

Nævus.

This case was a congenital subcutaneous nævus, located over the superior portion of the internal angle of the left eye, extending outward along the eyebrow four-fifths of its length, and the size of a pigeon's egg, occurring in a female infant two months old, who was sent to the hospital by Dr. W. T. White, attending surgeon. At birth it was but a slight elevation of the skin.

Electrolysis was performed, patient being under influence of ether, by inserting at each extremity of the longitudinal diameter of the tumor a needle, freshly insulated to a quarter of an inch from its point, and the current from twelve cells of a Drescher constant battery allowed to pass for fifteen minutes. The result was hardening of the tumor on a broad line between the insertion of the needles, discoloration of the skin around the negative needle, and the exuding of a quantity of frothy, yellowish material (said to be hydrogen mingled with blood), which on microscopical examination showed nothing but a few blood-corpuscles from the same point. Subsequently this discoloration sloughed, and healed without disfigurement. Later, an application was made to each of the portions of the tumor situated above and below the broad band of coagulation resulting from the former application. The child was discharged two months and a half from the date of the first application, with the tumor less than one-half its original size, still subsiding, and without any disfigurement resulting from the operations. These cases are common enough, without doubt; but the mode of their treatment by electrolysis is not so, recent writers and operators still

adhering to the old method in cases where this method would be more applicable. To increase the proof of its efficacy, and prevent others having the single unfortunate result we did, viz., sloughing of the integument at the negative, are our reasons for publishing this case. To obviate the latter, use, instead of a needle attached to the negative pole and inserted into the tumor, as is recommended by some authorities, with the same result as we had, a sponge-electrode, and apply it anywhere on the surface of the body in the vicinity of the tumor, which is the method practised by Althaus and McCall Anderson. The risks incurred by using an anæsthetic we think are unnecessary, and it was not used in the later operations.

SCIRRHUS OF THE MAMMA.

The patient was a woman, thirty years of age, married sixteen years, and a cook by occupation. Admitted to the service of Dr. C. K. Briddon, attending surgeon, August, 1876. There is no hereditary history of cancer. She is an emaciated, anæmic, nervous woman, with a tumor in her right breast, which first appeared eight months ago. It is hard, nodular, about the size of a hen's egg, non-adherent to the skin, which is discolored over the site of the tumor. The nipple is very much retracted. There are no glandular enlargements. Has sharp, shooting pains through her right shoulder and breast, sometimes keeping her awake at night, and symptoms of intestinal obstruction. The diagnosis of cancer of the breast had previously been made by Drs. Wood, Mott, Hamilton, and others, of Bellevue Hospital, where the patient had been for treatment of her intestinal trouble, and was concurred in here. She obstinately refused operative interference; so treatment by electrolysis was proposed and accepted, much to our satisfaction, as we greatly desired giving that method of treatment in these cases a trial, having watched several cases where the growth had been extirpated, but had returned and killed the patients in less than a year after.

On August 18th the first operation by the electrolytic plan of treatment was performed. A needle attached to the negative pole of a Drescher constant battery was plunged into the tumor near its base; a sponge-electrode attached to the positive pole was applied to the opposite side of the tumor, and the current from ten cells put in action, after the application of the electrodes. No anæsthetic was used, and no pain produced during the *séance* of ten minutes, in which time the tumor increased in size and became softer.

21st.—The above operation was repeated. The number of cells was gradually increased up to thirty-five, when a smart, burning sensation was felt at the location of the sponge- (positive) electrode, which is slowly moved around the opposite side of the tumor to that in which the needle is inserted. The current was applied at this strength for the last four minutes of the ten. No change was noticed in the tumor. 24th.—The current from eighteen cells was applied for ten minutes, in the same manner as before. 28th.—The current from twenty cells was applied for ten minutes.

September 1st.—The current from twenty-three cells was applied for twenty five minutes. 4th.—Twenty cells for half an hour. 8th.—Twenty-nine cells for half an hour. The tumor is thought to be larger and softer than when patient was admitted. 11th.—There has developed a small spot of inflammation over the centre of the tumor, on which account no application was made. 15th.—This condition has all subsided, and the application of twenty-five cells for thirty minutes was made without any disturbance to patient. 18th.—To-day commenced external applications of the current, applying a sponge-electrode on opposite sides of the tumor, in such a manner that the current will traverse the passages made by the needles. Used the current from ten cells for ten minutes.

Daily applications were made in this manner, using a current of the same strength and for the same length of time, till the 21st, when this treatment was interrupted by an attack of intestinal obstruction. On the 27th it was resumed in like manner, only using as many cells as possible without disturbing the patient. This was continued every day till October 23d, when another attack of intestinal trouble again interrupted the treatment. On November 1st it was resumed. At this date she complained of pain in the right axilla, and on examination the glands in this location were found enlarged to the size of marbles. Dr. Detmold and others, who had seen the tumor at the beginning of this treatment, and occasionally since, now declared the tumor to be no smaller, but otherwise enlarged. To this conclusion we were forced to concur.

November 6th.—The patient, being discouraged, left the hospital to-day. Treatment was continued up to date.

The result, then, of eight needle operations and thirty-four surface applications was simply relief from the severe pains which at times prevented sleep and made her very apprehensive. No anæsthetic was used at any operation. The needle was entered at a different point in the tumor, around its base, at each operation, and the sponge-electrode applied on the opposite side. The strength of the current was not regulated by the number of cells, but by the sensations of the patient. When she complained of a burning sensation or pain, the strength of the current was no further increased; but reduced till this subsided. This will account for the different numbers of cells stated as having been used at each operation.

LOCOMOTOR ATAXIA.

In the hospital, during this time, were two cases of this affection, which suffered extremely from the sudden, short, sharp, cutting pains and cramps in the muscles of the lower extremities, incident to the disease.

Case I.—F. V., a man thirty-four years of age, has had the disease a little more than six months, and also gives a history of syphilis.

Case II.—M. K., a woman, forty-eight years of age, has had the disease over a year, from no ascertainable cause.

They were both ordered to remain in bed, and the man, after various other modes of treatment, was put on the usual plan of gr. ¼, nit. silver, t. i. d.; while the woman was placed on the treatment of cod-liver oil, iron, and quinine. For the relief of their distressing pain a trial of the use of electricity was requested.

In looking for the methods recommended in the application of electricity in these cases, I found many authorities made use of it, but do not state their method. Amongst those who do, however, are Beard and Rockwell, who use most frequently galvanization of the spine; and Althaus, who uses galvanization of the cervical sympathetic.

Having found great relief following the use of the constant current applied in a different manner to either of these, in a case of fracture of the vertebræ, where shooting pains and cramps in the muscles of the lower extremities were annoying symptoms, and thinking the pathology in this case was similar to that of the other two, viz., pressure of bone and inflammatory products on the nerve-cells and fibres of the spinal cord, while in the other cases it was from increase of connective tissue, determined me to give the same

method a trial in these cases. Using sponge-electrodes moistened in salted water, the positive one was placed to one side of the seat of the lesion in the spinal cord, and kept stationary there; the negative electrode was placed alongside it, and a mild constant galvanic current set in operation. The negative pole was gradually moved down the posterior aspect of the limb as far as the sole of the foot, and afterwards along the anterior aspect as far as the knee, and the current allowed to traverse the portion of the body between the poles for about five minutes. This was repeated on the other side of the body, making the *séance* last twenty minutes. At first only relief followed the application; gradually the pains lessened in intensity, and finally, after fifteen applications in this manner, in twenty-five days the twitchings and pains had disappeared, and did not return during the patient's stay in the hospital of a few months.

Early in the course of this treatment I tried galvanization of the cervical sympathetic; placing one electrode in the auriculo-maxillary fossa, the other over the transverse processes of the ninth and seventh cervical vertebræ on the opposite side of the body, and using only a mild current. With the effect of producing alarming cerebral symptoms during one application, and after three successive daily applications, the relief, if any, was very slight, and did not correspond to that obtained by the other method, which was continued with very good results.

EMESIS.

CASE I.—A very emaciated boy, aged twenty, weighing eighty-two and one-half pounds, had typhoid fever thirteen years ago, and chronic abscesses for the past four years, till eight months ago, when they healed. Soon after he commenced vomiting his food once a day, a half-hour after eating. Never vomited anything else. The vomiting became constant, has continued, and his stomach is so irritable that at present he can retain a very little light liquid food at times. No marked organic lesion could be found anywhere, and his urine was normal. The surface of his abdomen over the stomach was ordered to be faradized five minutes before eating, using a mild current. After fifteen days of this treatment, when he was discharged for disorderly conduct, the history remarks: "The use of the faradic current has been very beneficial, he having vomited only a few times since its use, and eating the ordinary house diet."

CASE II.—A very emaciated man, aged thirty-two, had suffered from dyspeptic symptoms for three years, which have grown steadily worse, so that now he is unable to retain any but the most simple food on his stomach. Examination of his urine gives, chemically, phosphates in abundance; and, microscopically, leucocytes, triple phosphate crystals, round renal epithelial cells, fatty casts, and free fat-globules. Faradization in the same manner in this case only made him worse, so after a few days' trial it was abandoned.

CASE III.—Was a man, aged twenty-eight, suffering from cerebral congestion. When the alarming symptoms had subsided, nausea and vomiting persisted to a marked degree, preventing the administration of food or medicine. After a single application of the mild faradic current, one electrode being placed in the right auriculo-maxillary fossa, and the other over the stomach for several minutes, it ceased and did not return during the rest of his convalescence.

These cases demonstrate the therapeutical use of electricity, not in all cases of vomiting, but selected ones—most probably those due to nervous origin, either peripheral or central.

Progress of Medical Science.

COMPOSITION OF THE BLOOD-GLOBULE.—M. Béchamp has been studying the composition of the blood-globule, with the object of determining the existence of a proper investing membrane. In these researches he has employed a mixture of equal parts of blood and a ten or fifteen per cent. solution of starch, a small quantity of creosote being added. The globules of the duck, after six or eight days' removal from the body, retained their form, but on the addition of four or five volumes of water became swollen and pale, rendering apparent the nucleus movable in the cavity of the cell. At the end of twenty-three days they still retained their form, but were quite pale; on the addition of water they became almost spherical. Seen in movement they presented the appearance of nuclei, around which an exterior membrane was folded, wrapping and unrolling itself in obedience to each new impulse of the current. On filtering and adding tincture of iodine the nucleus and membrane could easily be distinguished, both colored yellow. The blood of other animals examined in the same manner gave similar results. These experiments, says M. Béchamp, are sufficient to prove the presence of a membrane, the existence of which renders easy the explanation of many facts, of which one is mentioned. The plasma of the blood is rich in soda, the globules in potassa. If, by means of the envelope, the globule is the seat of an osmosis necessary to life, this division is explained; the special nature of the membrane is opposed to osmotic exchange and equilibrium. So long as the envelope guards its contents,—that is to say, so long as it lives,—nothing can leave, and nothing penetrate the globule, except what it permits to pass.—*La France Médicale*, Feb. 6, 1878.

ON THE MODE OF DISSEMINATION OF ACUTE MILIARY TUBERCULOSIS.—Since the publication of Buhl's theory, the development of general tuberculosis is ascribed to a supposed virus, which forms in some diseased mass in the organism, finds its way in the circulating fluids, and produces by dissemination numerous secondary nodules. This theory is supported by weighty clinical, anatomical, and experimental facts, but no investigator has as yet succeeded in demonstrating the infectious substance either in the blood or in the multiple eruptions. It is exceedingly probable that the poison finds its way into the blood through the medium of the lymphatics; in fact, tubercular nodules have frequently been met with in the adventitia of the lymph-vessels, in immediate contact with caseous masses. In the hope of throwing some light on this subject, Prof. Ponfick has subjected the ductus thoracicus to careful examination, in a number of cases of localized and general tuberculosis. He found the duct normal in all the cases in which the tuberculosis was localized in the clinical and anatomical sense of the term, but in the majority of the cases of general tuberculosis it had undergone a peculiar alteration. This consisted in the development of usually multiple, small, tubercle-like nodules in its *intima*. The development of the nodules in this situation is unquestionably an evidence that the lymph which passed through the duct was exceedingly abnormal, that it contained some specifically irritating constituent. It furnishes a tangible proof—and up to the present time the only one—of the contamination of the circulating fluids with a substance, of whose nature we are as yet ignorant, but of whose existence there can no longer be any doubt.—*Berliner klin. Wochenschrift*, 1877, No. 46.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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LEGAL REGULATIONS FOR THE PRACTICE OF MEDICINE.

III.

SOME may feel inclined to doubt that the rights and duties of the State and county medical societies are as great as has been represented. We will state that many of the acts of the Legislature have not been repealed, although they have not been enforced for a long time, owing to the ignorance, negligence, or reasonable doubts of many of the officers of these societies. In order to prove this, we will give a short outline of medical legislation in this State.

The city and county of New York has always taken the lead in medical matters, and the practice of physic and surgery was first regulated in them on June 10, 1760; and next on March 27, 1792; finally, on March 23, 1797, the first general regulation throughout the State was adopted, authorizing the Chancellor, or a judge of the Supreme Court or of the Common Pleas, or a master in chancery, to license physicians and surgeons without special examination, on receiving evidence that they had studied medicine two years.

This Act of March 23, 1797, was revised and again passed with some alterations on April 4, 1801. It was further amended on March 23, 1803. Finally, the great Act of April 4, 1806, was passed, many of the provisions of which are still in force as revised in 1813, 1818, 1819, 1827, 1830, and 1874. This act incorporated State and county medical societies for *the purpose of regulating the practice of physic and surgery in this State*, as it was held that no learned profession can become truly respectable, respected, and useful to mankind, that is not under the restraint of the great body of its own members. It was also enacted for the purpose of preventing frauds on the community by ignorant and designing pretenders.

Strange or foreign physicians and pretenders were not allowed to intrude themselves on the community or the profession without examination of their qualifications; nor were our young medical men, or any of our citizens allowed to practise medicine without the control and acquiescence of the profession; and it was declared that, if the censors of the State and county societies faithfully performed their duties, that the powers entrusted to them were sufficient.

It was made a misdemeanor for any and every one to assume, without warrant, the role and character of physicians, which was ordered to be prosecuted by indictment and punished by the courts with a reasonable and laudable degree of severity. Mere indifference of the officers of the State and county medical societies, and of the profession at large, to the requirements of the laws about medical education and *character*, was regarded as a dereliction of duty, and, although ungracious tasks were imposed, none were to be allowed to shrink from any rightful share of duty and responsibility.

The Act of 1806 incorporated all well-educated and honorable physicians resident within their limits into county medical societies, delegates from which were formed into the State Medical Society. The duties of these societies were "to control and supervise all medical matters not yet provided for by statute," and to aid the State in carrying out the laws already existing; and, as far as their ability extended, to improve the practice of physic and surgery in this State.

This act, says one of the presidents of the State Society, "brought order out of confusion; settled the minimum measure of medical acquirement that would entitle any one to practise medicine; placed the power of licensing physicians in the hands of the State and county medical societies, and did not allow the diplomas of medical colleges to interfere with its exercise. The profession assumed a new character; emulation was kindled, for the restraints it imposed had long been felt to be necessary.

Again and again the laws of this State declared it to be the duty of the State and county medical societies to control, supervise, and, as far as their ability extended, to improve the condition of the practice of physic and surgery, and, of course, midwifery throughout the State; while the actions and motives of these societies were long in perfect accordance with the laws. The societies met month after month, and year after year, at great expense of time and money, to perform the duties which the law prescribed to them. It was again and again declared the business and duty of these societies to supervise and regulate for the good of the whole, the policy and jurisdiction of the profession, which they did at once, and continued their good work, without imposing any other restraints upon their members and the profession than such as commended themselves to the understanding and conscience of every enlightened individual; they

silently and successfully operated such a change in medical feeling and education as to make the character of the physician honorable and respected.

These societies then had a controlling influence over all the various medical associations throughout the State, including the medical colleges, and from them the people had, and still have, a right to require the most jealous vigilance in all matters relating to the education and deportment of those physicians to whom are committed their dearest interests; and it was repeatedly declared that, "in the whole catalogue of social duties, there was none which involved more weighty obligations, so that mere negligence magnified itself into an offence against society, which admitted no apology, because the evils it entails admit of no reparation."

Almost all the by-laws of the State and county medical societies, except their mere parliamentary rules, were carefully based and worded upon acts of the Legislature; and for many years men of powerful intellect, of unwearied public spiritedness, venerable for their useful lives, and entitled to the deep gratitude of the profession, devoted themselves to carrying out the laws. From 1806 to 1830 the unauthorized practice of physic and surgery was a misdemeanor punishable by fine or imprisonment, or both; and no physician, without being duly licensed and registered, could collect his fees. The laws of 1874 again enforce these wise regulations.

No physician from a foreign State or country could commence the practice of his profession without submitting his credentials to the officers of some county medical society, and if necessary, also to the Censors of the State Medical Society. The presidents of all county medical societies were and are still required to notify all physicians and surgeons to apply for membership in the society of the county in which they reside, and non-compliance subjected them to severe penalties. Diplomas from medical colleges were for a long time not a license to practise until the holders became members of their county societies; and no attempt was made to make the degree of Doctor of Medicine a license to practice until 1814.

The State and county societies alone were entitled to issue licenses to practise, which were given to physicians from foreign states and countries only when they exhibited satisfactory evidence that the course of medical instruction which they had pursued had been as full and complete as required by the laws of this State.

Students of medicine were licensed, and can still be licensed by the State and county medical societies, if twenty-one years of age and of good moral character, but only after four years' study with some lawful practitioner or a regularly educated physician.

In addition, a certificate of the date of commencement of study should be filed by the preceptor with the president of the county society in which such medical studies are pursued; but, in case of the neglect of the preceptor to file this certificate, the censors were empowered in 1828 to receive such satisfactory testimony as is attainable, especially from the preceptor or preceptors, if living.

As early as 1819, the expressions, "Studied with a REGULAR physician, *regularly* studied medicine and surgery," and others of similar import, occur in many of the proceedings of the societies.

From the term of four years of medical study, one year could be deducted if an ordinary collegiate course of Latin, Greek, and Mathematics had been pursued for one year after the age of sixteen, in some incorporated college; or, for one full course of medical lectures in a regularly incorporated medical college, of which the tickets of the several professors should be the only evidence. But in no case could less than three years' study of medicine entitle a student to apply for examination.

The student was also obliged to declare that the full term of three years had been applied to the study of medicine, and to no other pursuit. He was also obliged to declare that he had been examined and rejected by no other county medical society; for a student so rejected could and can only appeal to the State Medical Society, and could not and cannot be re-examined and licensed by any other county medical society; while a student rejected by the State Medical Society could not and cannot be re-examined by any county society, but only by the same State Medical Society.

As these rules still hold good with all county medical societies, including the Homœopathic and Eclectic, they doubtless will also obtain with all State Medical Societies. Thus, if a student or applicant for a certificate of qualification from the Medical Society of the County of New York be rejected, he cannot lawfully be re-examined by the censors of any of the Homœopathic or Eclectic County Medical Societies, but can only appeal to the Medical Society of the State of New York, and if rejected by that, he cannot properly take refuge and comfort with the Homœopathic and Eclectic State Medical Societies.

All the licentiates of the State and County Medical Societies were and are obliged to sign the following declaration, viz.:

"I, A. B., do solemnly declare that I will honestly, virtuously, and chastely conduct myself in the practice of physic and surgery; and that I will with fidelity and honor do everything in my power for the benefit of the sick committed to my charge."

This declaration, so signed, had to be preserved among the archives of the society admitting the candidate.

All those admitted to membership in the various regular county medical societies immediately come under the rules and regulations of the System of Ethics of the Medical Society of the State of New York,

adopted in 1823, and then declared authoritative to govern the medical profession in the State of New York.

This system of ethics was adopted by almost every county society in the following words: "Resolved: That the System of Ethics be adopted by this Society, and any departure from the true spirit and meaning (not merely from the letter) of such system shall subject the offending member to the discipline of this Society."

This would seem sufficient, but it might be advisable to remind each member, when admitted, of these obligations, or even exact some less wordy declaration of fealty, thus:

"I, A. B., do solemnly declare that I will honestly and faithfully conduct myself in the practice of physic, surgery, and midwifery, and do all in my power for the benefit of the sick committed to my charge."

Medical colleges are obliged to exact proofs of good moral character from all their matriculants, and the principal object of county medical societies is to maintain the high and honorable conduct of every medical person upon his or her graduation; and this great object should never be lost sight of!

SCHOOL HYGIENE.

It is quite natural, at a time when the school vacation has commenced, to review the doings of the past year, and strive to draw from the experiences of that period profitable lessons for the future. For many reasons, the people at large have great cause for congratulation that the system of public instruction is so perfect and so well adapted to the wants of the hour. In leading daily, in some editorial remarks upon this topic, we took the opportunity of saying that in no country was instruction for the masses carried to greater perfection, and in none were the ultimate results of public school training more satisfactory. This will meet a ready endorsement from every one acquainted with the system, and an earnest desire for a continuance of the same condition. It is safe to say, that far from any falling off of interest in these matters, the Board of Education are constantly making improvements and striving after absolute perfection. So far there are no regrets to offer. The case is very different, however, when we glance at the sanitary care of the scholars. In this regard it is perfectly safe to say that the children are almost precisely in the position they have been for the past five years. The School bill, as is well known, failed to pass in consequence of its late presentation, and the Board of Education has been left to manage sanitary affairs in its peculiarly ignorant and stupid fashion. Ventilation is still defective, the light is bad, the water-closets are offensive, the class-rooms, especially those of the lower grades, are overcrowded, and the numerous additions to the buildings made during the past year have repeated the defects which have heretofore existed. Aside from this no movement has been made to shorten the hours of study for the lower grades, a matter so clearly within the jurisdiction of the Board that there does not seem to be any reason for a non-compliance with suggestions other than a stubborn determination to carry out a particular policy. During the present vacation several additions are to be made to the school-buildings, but if we are to judge the future by the past, we must expect the same routine repetition of blunders, and the same conditions which in future will be causes for complaint. This is certainly a melancholy outlook, but is perhaps the best that can be expected under the present administration. It would appear that the Health Board is powerless to do anything but make suggestions, as by the present law the Educational Board makes its own sanitary regulations, and enforces them or not, as it pleases.

THE ELEVATED RAILROAD AND THE MEDICAL PROTEST.

The recent protest of a number of physicians of this city against the noise of the Metropolitan Elevated Railroad has been given to the public in a shape which will doubtless command considerable attention. Aside from the reasons why the din and racket should be abated, as set forth in the document, the formal presentation of a complaint to the Grand Jury will doubtless bring the whole matter up to the level of a fair and impartial discussion. There is no doubt that in the aggregate the harm to those of delicate nervous organizations, to convalescents, *et id omne genus*, is very great, and that some radical measures should be demanded to effect a change.

Reviews and Notices of Books.

PUBLIC HEALTH REPORTS AND PAPERS. Vol. III. Presented at the Meetings of the American Public Health Association in the years 1875–1876. Hurd & Houghton. New York.

The value of this compactly printed volume of 300 pages is twofold, in that, in the first instance, it furnishes a pretty clear exposition of the methods and recent researches of sanitary science in this country, as interpreted by its best masters, thus giving a pretty exact idea of the actual progress of the sanitary movement here; while, in the second instance, its papers themselves are, in the majority at least, real additions to the literature of public medicine. It appears from an appendix by the secretary of the Association that of the ten States that have sanctioned the organization of central (or State) boards of health, three—Alabama, Louisiana, and Virginia—have so far neglected to make adequate appropriations for maintaining the efficiency of said boards; while the seven which have voted the moderate pecuniary aid required, have developed very efficient systems of inquiry and record respecting the causation of prevailing diseases and endemic visitations, and have collected and disseminated an amount of sanitary information, coupled with practical suggestions, which demonstrate the utility and profit to States of such

organizations. In Alabama and Texas, in particular, although the people at large have failed to respond to the efforts of medical men to effect an improved sanitary administration, the attention of leading publicists has been attracted to the subject in a manner that bids fair to eventuate in effectual legislative intervention. One group of points upon which the secretary very properly congratulates the Association is the increasing popularization of sanitary science that has resulted from founding central health boards, the quickened spirit of inquiry in relation to the general causes of disease, and the improvement of school hygiene during the last two years. The medical profession, civil engineers, public health officers, and the educated classes generally, have thus been brought into cordial co-operation in organizing and superintending the registration of vital statistics, and in establishing methods of exact statistical, topographical, and geological inquiry, in place of the random guesswork that prevailed so very generally only a few years ago. The questions of sanitary police and the supervision of contagious diseases have been very especially forced upon popular attention by the efforts of such bureaus; so that the physicians of the United States may well felicitate themselves upon having at last obtained a popular hearing as respects the more important problems of public medicine. The mountain is now passed; henceforth the way to sanitary reform, in all its aspects, is easy and simple.

The bulk of the volume is composed of about thirty special papers, in the preparation of which by their respective authors special reference has been had to treating the topics discussed in a popular manner, and to the exclusion of the dry details of statistical tables. Dr. Flint's paper, "Food in its Relations to Personal and Public Health," is a model as respects these qualities, while, at the same time, it is conceived and executed in the largest spirit of science, dealing in ripe results rather than in tedious processes. His main argument is directed against the long popular, but now partly abandoned theory that extreme abstemiousness is conducive to vigor and longevity, and to the evidence that a full and generous alimentation is one of the essential conditions of physical and mental efficiency. His final conclusion is that all theories and hypotheses which are in antagonism to the instinctive provisions for alimentation, must lead to practical errors. Hence it is equally an error to live upon vegetable food alone, or exclusively upon animal, and the instances of the former quoted by fanatics only prove, in his opinion, that life and fair health may be maintained under considerable difficulties and disadvantages.

The "Sanitary Regulation of Abattoirs," by Henry G. Crowell, of the Boston Health Board, while a great part of its material is only of local interest, contains many practical observations and suggestions that are valuable to all city communities. He quotes, in particular, a vivid picture from Prof. Dalton, of the manner in which cattle are herded in this city previous to slaughtering, which is worth the consideration of public-spirited citizens who may be inclined to censure our Board of Health as a little fussy. The board has, however, accomplished a great deal in the sanitary police of slaughter-houses since Dalton wrote his picturesque paragraph, though the problem of disposing of the 4,000 tons of offal and 450,000 gallons of blood annually produced by the slaughter-houses of New York, is still an unsettled one in many respects. They have dealt more radically with this question in provincial Boston than in cosmopolitan New York; the business of slaughtering having been prohibited within city limits since June, 1876, and the new abattoir at Brighton, covering an area of about fifty acres, having practically obtained a monopoly of the business. Mr. Crowell devotes the two concluding pages of his article to a description of the great Brighton abattoir and its conveniences for the disposal of offal, fat, blood, etc., which is worthy the perusal of medical men who may not have inspected that model edifice. How far in advance of New York Boston is as respects the slaughtering and distribution of animal food, can only be inferred from a careful reading of the facts brought to light in the Transactions of the Association; and the contrast should certainly stimulate our own Board of Health to seek the legislation essential to the adoption of some such plan here. A general inspection act to protect the people against the liability of buying or eating diseased or unwholesome meat, gives to inspectors, not in Boston only, but throughout the State, the power to enter all buildings or enclosures where animals are stored for slaughter, and to seize and destroy all such as are unfit for human food. The point of Mr. Crowell's paper is that the business should be all concentrated in one locality, with suitable buildings and appliances, properly inspected and policed, and not scattered in small and unsuitable structures, rendering nugatory the closest sanitary supervision.

Very properly the paper of Dr. E. H. Janes, our Assistant Sanitary Superintendent, on the "Abattoirs and the Slaughter Business in New York," follows that of Mr. Crowell, and completes the contrast that has been hinted at in the preceding paragraph—a contrast very uncomplimentary to the intelligence and public spirit of our citizens, and equally so to the procrastinating, compromising weakness of our State legislation on this important sanitary issue. Dr. Janes proposes the same remedy here that has proved so advantageous in Boston, to wit, the concentration of the business in large and well-adapted and policed abattoirs; but preludes his proposal with a picture so dismal and discouraging of the existing state of the business, that it should stimulate the medical profession at large to spare no effort to create a public opinion fairly appreciative of the facts and of their peril to public health. The influence of State health boards in promoting the ends of sanitary science, and developing a valuable literature of the same, receives, indeed, a telling exemplification in this report of the American Public Health Association, and suggests the propriety of pressing the question of a central organization in this State upon the attention of the Legislature; for, while the medical men of New York are fairly represented in the volume, its thorough sanitary papers are, for the most part, from States in which such organizations have existed for several years. The paper on "Expert Testimony and the Public Service of Experts," by Prof. Emory Washburne, of Cambridge; that on "Expert Supervision of the Construction and Internal Arrangement of Public Institutions," by Dr. Steiner, and Dr. Garvin's report on the "Sanitary Requirements of Factories," are all examples of the influence of the State Board of Health, Mass., not only in stimulating exact methods of inquiry, but in fostering coherent thought as concerns the most important questions of public medicine—how hygienic reforms are to be effected, the legislation essential to give practical significance to them, and the best methods of educating public opinion. The report of Prof. Wood, of Harvard University, on "Illuminating Gas in its Relation to Health," forms but another illustration of how far central organizations contribute to build up a cohe-

rent literature of sanitary science, and through such a literature to create the public opinion essential to procure legislation in the first instance, and to enforce it in the second.

The subject of marine hygiene, forming the third division of the report, supplies the themes of three papers, giving, within moderate limits, a *résumé* of the literature, legislation, and actual facts, that will be of lasting service to the medical inquirer. The "Safety of Ships and of those who Travel in Them," by Supervising Surgeon General Woodworth, of the United States Marine Hospital, very naturally occupies the first place, and gives, besides practical suggestions, a thorough survey of the sources of information and the statistics of marine sanitary science in the United States, discussing the progress and value of the Coast Survey, and the respective present conditions of the Light-House and Life-Saving Service, the Marine Hospital, and the Steamboat Inspection Service, with an intelligence and exactness that only an expert can acquire. Medical Inspector Gihon, of the navy, follows in a paper urging the "Need of Sanitary Reform in Ship-Life," discussing the causes of the low average of life in the marine service, exposing the defective ventilation of vessels, and finally adverting to that prolific source of shortened life-terms among sailors, venereal disease, and the legislation essential to its control and final extermination. "Our ships," says this distinguished expert, "are not only carriers, but generators of disease. In the history of the navy, there are many instances where disastrous zymotic fevers have been developed on board men-of-war from the decomposition of chips and sawdust, planked up with scandalous criminal negligence beneath the ceiling during construction, and there left to rot with other vegetable refuse from provisions and stores." He concludes by advocating a thorough sanitary inspection of the navy and commercial service; and is followed by Dr. A. N. Bell, of this city, in some practical conclusions respecting "Marine Hygiene on Board Passenger Vessels," based upon the experience of ocean lines in communication with New York, commencing with 20.000 emigrants to the United States who perished of ship-fever in the year 1847, and tracing the comparative mortality in sailing vessels and steamers from that date to 1876. It appears that the ratio of deaths in sailing vessels is five to one as compared with steamers, and that the elimination of the former from the emigrant carrying service was mainly in consequence of that fact.

The papers included within Part IV. of the report are some of them very striking, although little space is left to allude to them, and readers must be referred to the volume for glimpses of the facts collected and discussed by Director Gardner, of the State Survey, on "Topographical and Sanitary Surveys in their Relation to Public Health Studies," and by Mr. Shedd, of Providence, on "Water Supplies for Large Institutions and Small Communities." Dr. Elisha Harris reports upon the progress of a "Plan for a Sanitary Survey of the United States," but proposes nothing very definite. Kirkwood's work on the "Fluviatile and Pond Basins" of the central tract of New England, the surveys of which were made under the auspices of the State Board of Health, Mass.; Engineer Shedd's contour maps of the sewerage and drainage of Providence and the vicinity; Prof. Newberry's geological survey of Ohio; Prof. Cook's of New Jersey, and the topographical survey of New York under the direction of Engineer Gardner, are illustrations of the materials that a sanitary survey may be expected to develop. The Signal Service Bureau might, Dr. Harris thinks, become an important source of information.

But such movements are perhaps too far in advance of public opinion to obtain a very respectful hearing; and there are other papers of more immediate import to be noted—for example, Engineer Shedd's notes on "Water Supplies for Large Institutions and Small Communities," and the able and almost extraordinary article on the "Sanitary Appointments of Dwelling-Houses," by Ezra M. Hunt, M.D., Secretary of the State Board of Health of New Jersey, which will be discussed more at length at some time hereafter, inasmuch as it abounds in facts and original suggestions that cannot be condensed. The exhaustive dissertation on the "Gases of Decay," contributed by Prof. Brewer, of Yale College, must also be read as a compact whole to be appreciated; while Colonel George E. Waring's paper on the "Sanitary Condition of Country Houses and Grounds" may be recommended to our rural subscribers as worthy of careful attention upon a subject that interests their practice.

The work of the Association for 1875 and 1876 has thus been rapidly sketched, with the omission of matters of minor interest. The value of State boards of health, once alluded to, has a particularly pertinent illustration in Dr. Hunt's paper just cited, which may be regarded as one of the direct products of an aptitude for sanitary research fostered and stimulated by a central bureau promotive of such work; and while all the papers are intended for general circulation, and are popular in their treatment, for thoroughness and largeness of thought they compare favorably with the best English literature of sanitary science. Indeed, for grasp, penetrating power, and originality, Dr. Hunt's article is scarcely inferior to Pettenkofer's famous inquiry as respects the ætiology of typhoid fever.

Reports of Societies.

AMERICAN NEUROLOGICAL ASSOCIATION.

Fourth Annual Meeting.

HELD IN THE CITY OF NEW YORK, JUNE 19, 20, AND 21, 1878.

WEDNESDAY, JUNE 19—FIRST DAY—AFTERNOON SESSION.

THE Association met at the College of Physicians and Surgeons, on Wednesday, June 19th, and was called to order at 2.30 P.M. by the Secretary, DR. E. C. SEGUIN, of New York.

On motion, DR. R. T. EDES, of Boston, was elected President *pro tem.*

Reading of minutes dispensed with.

PRIZE ESSAYS.

The report of the Committee on Essays competing for the prize offered by Dr. Hammond, of New York, was read. The subject given was ON THE PHYSIOLOGICAL ACTION OF STRYCHNIA ON THE BRAIN, SPINAL CORD, AND NERVES. When the envelope bearing the motto of the successful essayist was opened, it was found to contain the name of DR. E. C. SPITZKA, of New York.

Dr S. W. Webber, of Boston, Second Vice-President, took the chair.

Dr. J. S. Jewell, of Chicago, by letter offered a prize, for the ensuing year, of two hundred dollars for the best original researches on the physiology of the nerves of the uterus and the ovaries.

The resignation of Dr. Walter Hay, of Dubuque, Iowa, was read and accepted.

Dr. Hammond renewed his prize of two hundred and fifty dollars. Neither the conditions of the prize nor the subject were stated.

THE COMMITTEE ON NOMINATIONS.

The Vice-President appointed Drs. Edes, of Boston; Shaw, of Brooklyn; and Mason, Gibney, and Beard, of New York, as Committee on Nominations.

The first paper was read by Dr. E. C. Spitzka, of New York, and entitled

THE OLIVARY BODY IN MAN, THE CHIMPANZEE, AND IN THE LOWER MAMMALIA.

The first trace of the olivary body which was found in the lower animals was the homologue of the internal accessory olive of man, and could in both instances be traced to be continuous with part of the anterior gray cornua of the cord. The next step was the development of a U-shaped involution, which was the homologue of the true olivary body, and which became more and more complicated as we proceeded from the carnivora to the South American, thence to the Old World monkeys, and reached its highest point in man. The olive of the anthropoid chimpanzee was less different from that of man than it was from that of the baboon, and there were individual variations in the shape and size of the olive, especially among imbecile and idiotic human beings, which approximated the ape type.

The paper was discussed by Drs. Webber and Putnam, of Boston.

A CASE OF PROBABLE HEMORRHAGE INTO THE CERVICAL ENLARGEMENT OF THE SPINAL CORD.

Dr. J. J. Putnam, of Boston, reported a case in which, he thought, the suddenness of the development of the symptoms and the permanence of the paralysis left but little doubt that there was hemorrhage into the cervical enlargement of the cord. There was no autopsy. The patient was a female, 30 years old, and without suspicion of constitutional disease. She was seized suddenly with a sensation of tightness about the chest and essentially complete paralysis of the arms and shoulders, and notable paralysis of the intercostal and abdominal muscles. At first there was severe pain in the cervical region and shoulders. Subsequently sensation was so disturbed that the strongest means did not excite pain in the arms, and yet the slightest touch could be appreciated. The electrical reaction was entirely destroyed in the muscles affected. With reference to the distribution of the paralysis, Dr. Putnam thought it could not be explained on anatomical grounds either in this case or when it occurred as the result of poisoning by certain substances. He believed there were different degrees of vulnerability of nerves, and that in cases in which the muscles of the fingers were involved the paralysis was due to that fact rather than a lesion occurring invariably in particular regions of the cord. In other words, the nerve-nuclei supplying the muscles had a peculiar vulnerability.

Dr. Beard, of New York, remarked that the communication made by Dr. Putnam was interesting in that he had called attention to the fact of certain muscles being affected while others remained unaffected. In certain conditions of the spinal cord, where there was no positive lesion, Dr. Beard had noticed that parts supplied by the ulnar nerve were numb at times. In other cases all the fingers were numb at times; and why those nerves more than any other, he was not able to answer, except upon the supposition that they were more susceptible—a supposition which at present could not be explained. In these cases there was almost invariably tenderness about the spine, and at times numbness. An interesting therapeutical fact was that counter-irritation, usually small blisters, would remove all spinal tenderness, and with that the numbness. In all the cases the numbness was functional.

Dr. E. C. Seguin, of New York, was indisposed to conclude, from the suddenness of the paralysis, that the symptoms were due to hemorrhage into the cord. The development of paralysis in infantile cases was sudden, and yet there was but one case on record in which clot was found.

Reference was also made to a case in which there was a sudden accession of symptoms, the man falling in the street. There were no symptoms above the neck. The patient died in the course of a few days of asphyxia. Diagnosis had been made of *hemorrhage into the spinal cord*, but upon making the autopsy the exceedingly rare lesion of

RED SOFTENING OF THE CERVICAL ENLARGEMENT

was found.

The anæsthesia was a more important symptom, but that did not seem to be complete.

With reference to the origin of the nerve, he had been able to produce a sensation in the distribution of the ulnaris by galvanizing the spine in the region of the root of the sixth cervical.

Dr. Putnam remarked that he was not inclined to cling to his diagnosis, and thought it probable that the change in the cord was inflammatory.

ON THE CAUSE OF TRANSMISSION OF THE ELECTRICAL STIMULUS ACROSS THE MEDIAN LINE OF THE BODY.

Dr. G. M. Beard, of New York, made a contribution, the basis of which was Dr. Weir-Mitchell's paper upon the above subject, published in the last volume of Transactions of the Association.

Dr. Mitchell had supposed that the transmission of the electrical stimulus across the median line of the face was a new fact in electricity, and, associated with Prof. Barker, of Philadelphia, had reached the conclusion that it was due to the development of induced currents.

Dr. Beard regarded Dr. Mitchell's observation as correct, but his explanation was incorrect, as could be easily demonstrated by Ohm's law, and experimentally by means of the galvanometer and the galvanoscopic frog. The true explanation was, that diffusion of a very moderate quantity of the galvanic current occurred.

Dr. Webber, of Boston, remarked that there were many electrical phenomena which probably were due to diffusion of currents.

In that connection he referred to two cases in which spasmodic contraction of the muscles of the face could be produced by influencing the emotions, the contraction occurring while the electrode was at considerable distance from the face. He did not think that the current was diffused through the air.

AFFECTION OF THE SPINAL ACCESSORY.

Dr. Spitzka exhibited a case in which there were spasmodic contractions of every muscle supplied by the spinal accessory nerve. There were no physical signs of thoracic disease. There was paralysis of the vocal cords.

GALVANOMETER.

Dr. Putnam exhibited a galvanometer, with markings indicating *units of quantity of electricity* rather than corresponding portions of a circle.

The Association then adjourned, to meet at 8.30 P.M.

Evening Session—First Day.

The Association was called to order by the Vice-President, Dr. Webber.

The Council reported the name of Dr. L. C. Gray, of Brooklyn, for membership, and he was unanimously elected.

SUGGESTION AS TO THE NOMENCLATURE OF INFLAMMATORY AFFECTIONS OF THE SPINAL CORD.

Dr. Webber, of Boston, read a brief paper in which he suggested the use of terms indicating the character of the disease affecting either the white or the gray substance of the spinal cord. Myelitis was the only term in use which in any way indicated the nature of the affection. The terms acute interstitial and acute parenchymatous myelitis were suggested, although clinically they could not yet be distinguished with certainty. The term chronic parenchymatous myelitis was suggested as a substitute for locomotor ataxia, and chronic interstitial myelitis for sclerosis in patches.

RECOVERY OF VISION AFTER BLINDNESS FROM BRAIN DISEASE.

Dr. A. D. Rockwell, of New York, reported a case in which there was total loss of vision and subsequent complete recovery of sight. The patient was a man in middle life, and the subject of epileptic seizures.

Dr. Rockwell supposed the loss of vision was due to indirect or reflex injury arising from lesion in the neighborhood of the tubercula quadrigemina.

The paper was discussed by Drs. Seguin, Putnam, Webber, and Spitzka.

CLINICAL AND THERAPEUTICAL CONTRIBUTION TO OUR KNOWLEDGE OF CERVICAL PARAPLEGIA.

Dr. E. C. Seguin, of New York, read a paper in which were embraced the detailed history of three cases. In the first case the myelitis was arrested by the use of nitrate of silver, arsenic, oxide of zinc, cod-liver oil, thorough galvanization and friction. There was a certain resemblance in the case to acute spinal paralysis of the adult. In the second case there was marked improvement, but it might be said to be due to antisyphilitic treatment and to rest. The third case had been under treatment only a short time. In all three cases the kinesodic, the æsthesodic, and the musculotrophic tracts of the cord were affected.

APPARATUS FOR THE RELIEF OF WRITERS' CRAMP.

Dr. G. M. Beard exhibited an apparatus for affording relief in writers' cramp. It consisted of a penholder with rings and supports, so adjusted that the index and middle fingers could be used independently of support from the thumb, and also without being subject to the pressure made by holding the pen or pencil in the usual manner.

NEW APPARATUS.

Dr. Putnam exhibited an apparatus for supporting the hand in cases of "wrist-drop." It consisted chiefly in a modification of Barwell's artificial muscle.

The Association then adjourned, to meet on Thursday, June 20th, at 2 P.M.

Thursday, June 20th—Second Day—Afternoon Session.

The Association was called to order at 2.30 P.M. by the Vice-President, Dr. Webber.

REPORT OF COMMITTEE ON NOMINATIONS.

The Committee on Nominations made the following report: For *President*, Dr. F. T. Miles, of Baltimore. For *Vice-President*, Dr. S. G. Webber, of Boston. For *Secretary*, Dr. E. C. Seguin, of New York. For the *Council*, Dr. J. J. Mason and Dr. F. P. Kinnicutt, of New York.

The report was accepted and adopted.

After the transaction of miscellaneous business,

Dr. N. B. Emerson, of New York, reported a case of

PROBABLE ANEURISMAL TUMORS OF THE BRAIN.

The patient was a male, æt. 46, who denied syphilis but suffered severe pain in the head, chiefly in the occipital region, and had some loss of memory. His gait was somewhat tottering, but there was no paralysis. Voluntary movements were performed with tolerable precision. He said he had never had a convulsion, but his wife stated, after his death, that he had had convulsions occasionally during the last year of his life. He died in a convulsion. Sensibility normal. His urine had a low specific gravity, and contained albumen and casts There was atrophy of the optic nerve, and retinal hemorrhage. There were hemorrhagic patches of varying size on the surface of the body, which were persistent, and increased in number up to the time of death. There were no hemorrhagic discharges from the body.

At autopsy, small bodies were found in the gray matter of the brain, generally located near the pia mater. They appeared to be surrounded by a capsule, and when cut presented an appearance as if made up of a number of laminæ of different colors. They were about 2.5 mm. in diameter. Microscopical appearances: Central portion consisted of amorphous matter; outside of that was a zone of granular matter with fibrillation towards the periphery, and containing round nuclei; outside of that a zone of fibres, wavy, irregular, nucleated; also contained free nuclei and possibly spider-cells. The outer zone was rather vascular. Dr. Emerson regarded the bodies as *large healed* miliary aneurisms.

Dr. Spitzka regarded them as miliary syphilomata of a myxomatous nature, having their origin in the adventitia of the blood-vessels.

Dr. Seguin thought they were aneurismal tumors, because the central portion had the appearance of a thrombus undergoing retrograde metamorphosis, and also because there was no evidence of the connection always present between a gummatous growth and the normal tissue in which it occurred.

Dr. Edes, of Boston, regarded the tumors as aneurismal.

Dr. E. C. Spitzka, of New York, then gave a

DEMONSTRATION OF THE BRAIN OF THE MENOBRANCHUS

by means of microscopic specimens. Special attention was called to the large size of the nuclei, the fibrillar

structure of the protoplasm, and the embryonic condition of the hemispheric cortex. One specimen exhibited showed a powerful axis-cylinder process, clearly traceable through the whole cord to the root-region of the anterior nerve-roots.

DR. EDES asked if Dr. Spitzka had seen anastomosis between the processes of ganglion-cells.

DR. SPITZKA thought he had seen unquestionable anastomosis.

DR. EDES remarked that he had many times looked carefully for anastomosis, and, in one specimen, he for a long time supposed that an anastomosis could be demonstrated, but finally he discovered that it was only apparent, and that one process was lying upon another.

DR. SEGUIN remarked that he had had the same experience related by Dr. Edes, and that his supposed anastomosis had been resolved into super-position of fibres.

SYPHILITIC DISEASE OF THE SPINAL CORD.

DR. S. G. WEBBER, of Boston, Vice-President, read a paper containing the history, and exhibited microscopic specimens illustrating the pathological changes attendant upon a case of syphilitic disease of the spinal cord. The case was interesting chiefly because of the enormous increase of spider-cells. With that there was also increase of nuclei and fibrous tissue. The newly-formed tissue was developed at the expense of the nerve-fibres and cells. It was a variety of glioma. The greatest change was just below the cervical enlargement, especially upon the left side, and the central part of the cord was occupied by a mass of diseased tissue.

DR. SEGUIN remarked that the spider-cell was found in a great variety of conditions, and that, in conjunction with Dr. J. C. Shaw, of Brooklyn, they had made an effort to determine in their own minds how far the presence of such cells could be regarded as conclusive evidence of actual inflammatory action; that is, of abnormal nutrition in the very elements of connective tissue, as compared with degenerative changes which occurred in nerves and nervous tissue.

DR. WEBBER regarded the spider-cell as a neuroglia cell. Of course such a demonstration was not easy, because of the presence of the nerve-fibres. When inflammatory change was set up, the cells invited carmine more readily, and their processes could be more easily seen than in normal specimens. When the inflammatory process became chronic, the cells took the carmine less readily, and it was sometimes difficult to see them. That was the stage of atrophy. He thought it was fair to conclude that every large nucleus, especially oval-shaped, was the nucleus of a spider-cell. He regarded the cells as evidence of inflammatory action.

DR. SEGUIN fully accorded with Dr. Webber, and said that in addition he had noticed what could be called cloudy swelling of the spider-cells.

DR. WEBBER had observed the same thing, and in addition an appearance which seemed to indicate that white blood-corpuscles had migrated into the spider-cells. He also believed that they underwent fatty degeneration, and in that way disappeared.

DR. SHAW remarked that the condition of fatty degeneration of the cells could be seen to good advantage in the last stages of disseminated sclerosis of the cord. He also thought that the presence of two or three nuclei, or leucocytes according to Dr. Webber, was due to division of the nucleus.

DR. WEBBER remarked it was quite possible that such was the case.

SOURCES OF ERROR IN EXPERIMENTING UPON HUMAN BEINGS.

DR. G. M. BEARD, of New York, read a paper in which he maintained that the sources of error in experimenting upon human beings were six in number:

1. The phenomena of involuntary life in both experimenter and the subject experimented upon.

Without a knowledge of that side of physiology scientific experimenting upon human beings was impossible.

2. Unconscious deception upon the part of the subject experimented upon.

That was a source of error which must be carefully guarded against in all ordinary experiments with reference to new remedies. Miracles of healing came under that head.

3. Intentional deception upon the part of the subject.

General reputation for honesty must be ruled out as unscientific.

4. Unintentional collusion of third parties.

Third parties must remain absolutely silent and motionless during certain experiments—a thing impossible for some persons.

5. Intentional collusion of third parties.

6. That which came from chance and coincidence.

Dr. Beard concluded by saying that delusions almost always found their weapons in scientific armories. Experiments should be made only where inductive reasoning did not settle the question. When experiments were made, sources of error should be carefully considered.

The paper was briefly discussed by Drs. Mason, Kinnicutt, Seguin, and Putnam.

The next paper was read by DR. E. C. SEGUIN, on

AMYOTROPHIC LATERAL SCLEROSIS.

The paper embraced the history of a case and a description of the pathological lesions. The lesions were demonstrated by means of microscopic specimens.

Dr. Seguin was not able to say what became of the sclerosis above the decussation in the pyramids.

He localized the change in the crossed pyramidal column.

He regarded the lesion as truly inflammatory.

The paper was discussed by Drs. Shaw and Putnam.

The Association then adjourned, to meet at 8.30 P.M.

EVENING SESSION—SECOND DAY.

The Association was called to order by the Vice-President.

The first paper was read by DR. L. C. GRAY, of Brooklyn,

ON CEREBRAL THERMOMETRY.

The object of the paper was to show that temperature, as determined by thermometers applied to the surface of the scalp, was a valuable aid in the diagnosis of brain disease. The thermometers were arranged in a belt which surrounded the head. The temperature was taken at stations where the coverings of the brain were thinnest. Dr. Seguin's surface thermometers were employed, so modified that pressure did not vary the elevation of the mercury, and also made self-registering.

If the temperature was elevated more than 2 or 2½° F. above the normal, an abnormal condition of the cranial contents was to be suspected. Dr. Gray had examined a large number of cases, and in some had verified his diagnosis by post-mortem examination.

DR. WEBBER could not readily understand how the

change in temperature of the brain should be so localized when it was not immediately connected with the skull or the scalp.

Dr. Shaw referred to the same point.

Dr. Gray thought the thermometer could indicate the temperature of the cerebral surface because both the skull, which was a thin layer of bone at places, and the scalp were good conductors of heat.

Dr. Seguin thought that *delicate* cerebral thermometry was not of much value, but that the limits put upon it by Dr. Gray rendered it capable of being of some service.

Dr. A. McLane Hamilton, of New York, thought it probable that the functional disturbances of the scalp would explain the variation in temp rature. Discussion was continued by Drs. Beard, Kinnicutt, Emerson, Hamilton, and Gray.

GENERALIZED ATHETOSIS

was the subject of a paper read by

Dr. F. P. Kinnicutt, of New York. The paper consisted chiefly of the history of a case.

It was discussed by Drs. Seguin and Webber.

Dr. V. P. Gibney, of New York, gave a detailed history of a case of

CERVICAL PARAPLEGIA.

It was a case which presented notable difficulties in diagnosis.

The report was discussed by Drs. Seguin and Emerson.

The Association then adjourned, to meet on Friday, at 2 P.M.

Friday, June 21st—Third Day—Afternoon Session.

The Association was called to order at 2.30 P.M. by the Secretary, and on motion,

Dr. E. C. Spitzka, of New York, was elected President *pro tem.*

NEXT ANNUAL MEETING.

The Council were authorized to determine where the next annual meeting should be held.

The first paper was read by

Dr. J. J. Putnam, of Boston, and entitled

OBSERVATIONS ON THE INTRA-OCULAR CIRCULATION.

The observations were made by Drs. Putnam and O. F. Wadsworth, of Boston. After experimenting upon themselves with atropine, nitrite of amyl, pressure upon the carotids and jugular veins, and taking tracings from the surface of the brain of a man who had received a fracture of the skull, they arrived at the following conclusion: that mechanical causes did not readily, if at all, induce appreciable arterial congestion of the fundus oculi, and the degree of venous fulness so produced was not such as to justify, if seen in an eye examined for the first time, the belief that it was pathological. They were, therefore, led to doubt whether such condition as congestion of the retina, unassociated with inflammation of a greater or less degree, in which case the term congestion would be, properly speaking, a misnomer, was ever met with.

Dr. J. C. Shaw, of Brooklyn, remarked that in conjunction with Dr. Matthewson, of Brooklyn, he had performed a series of experiments, and they had arrived at the conclusion that but little reliance could be placed upon ophthalmoscopic examination of the eye with reference to cerebral anæmia or hyperæmia. They were positive that no arterial change occurred, and the venous change was very trifling, if any at all was produced. Drs. Shaw and Matthewson experimented to considerable extent with quinine.

Dr. Gray, of Brooklyn, thought it unfair to infer that the ophthalmoscope was useless as an aid in determining the condition of the cerebral circulation merely because quinine administered in large doses produced no appreciable change in the condition of the vessels of the fundus, for it was not yet determined whether quinine produced anæmia or hyperæmia of the brain.

Dr. Beard referred to an injected condition of the conjunctiva commonly seen in cases of nervous debility. Such an appearance of the conjunctiva was not to be regarded as pathological, and yet it was probable that the same diffused redness, if seen in the retina, would be regarded as evidence of intracranial lesion, although it possessed no more significance than did the conjunctival injection.

Dr. Seguin did not attach much value to ophthalmoscopic observations as commonly made with reference to brain lesions. He regarded it as important to make separate statements in the clinical notes with reference to the condition of the fundus and of the retina.

Dr. Spitzka spoke of the hyperæmia of the optic disk present in the general paralysis of the insane.

Dr. G. M. Beard related the history of a case of

AGORAPHOBIA.

The particular thing which the patient "*could not do*" was, to go to church. After being improved by both local and general treatment the doctor took his hat and said that he was ready to go to church, and the lady went with him and remained through a long service.

The point made in the Doctor's remarks was that it was useless to apply mental therapeutics until the patient's general system was elevated into a tolerably good condition. Objective and subjective treatment should be combined.

ELECTROLYTIC TREATMENT OF FIBROID TUMORS.

Dr. Beard, in speaking upon that question, expressed the opinion that the results brought about in the treatment of that class of tumors were produced through the nervous system, and not by electrolysis; that is, that there was but little chemical change produced in the tumor, the cure being effected by the influence upon nutrition, direct and reflex, and not by electrolysis.

JUMPERS, OR JUMPING FRENCHMEN, OF MOOSEHEAD LAKE, MAINE.

Dr. Beard remarked that he was in the midst of an investigation with reference to automatism of the involuntary life, and for the reliability of the phenomena of which he gave an account he was willing to hold himself personally responsible. There were in the northern part of Maine, among the lumbermen, a large number of Canadian Frenchmen who were called jumpers, or jumping Frenchmen, from the habit which they had, apparently hereditary, of jumping or striking upon any sudden excitation. For example, if one of the jumpers was told he might jump a number of feet, he was not able to resist the order, even though he was jumping into danger, as into a pond. Sometimes severe accidents had occurred in that way. If a number of them were in a room smoking, and a

person suddenly entered and told them to throw away their pipes, they threw them away without reference to risk of breaking them. If, when walking the street, one of the jumpers was told to strike a third party, he was unable to resist and would strike with whatever he had in his hand, and would strike his best friend, even though death would be the result.

The men seemed to be entirely deficient in inhibitory power under sudden excitation. They acted much as though mesmerized or as entranced persons acted when under the control of the operator.

They cannot usually speak the English language, but when suddenly addressed in English they automatically replied in English instantly.

The automatism was a very great inconvenience to the men, but they were entirely unable to control themselves. It was not an epidemic, but was a fixed state or habit affecting a large number of those people life-long, and running in families.

Dr. Beard regarded the phenomena as an extreme illustration of what we all are—that is, they possessed far less inhibitory power than we all possessed.

STRUCTURE OF THE GANGLIONIC BODIES OF THE CEREBRO SPINAL AXIS.

DR. H. D. SCHMIDT, of New Orleans, presented a very lengthy paper upon the above subject, which was read by the Secretary.

The conclusion reached was, that all ganglion-cells were composed of two elements, anatomically and functionally distinct. The one was represented by *fine nervous fibrillæ* (not a network, as asserted by Gerlach), the function of which was to conduct nervous energy; the other, a vesicle nucleus, the function of which was probably to elaborate the potential energy residing in it.

DR. SPITZKA disagreed with the author of the paper in several particulars.

The last paper was read by DR. E. C. SPITZKA, on

THE SIGNIFICATION OF THE ABSENCE OF PALPABLE PATHOLOGICAL LESIONS IN CERTAIN FORMS OF INSANITY.

In many forms of insanity, neither structural change nor anomalies of the blood-supply could be demonstrated, and *à priori* such conditions need not be looked for in a disease like intellectual chronic mania, which the writer was inclined to attribute to faulty anatomical association, asymmetries and analogous condition, rather than to structural change.

We should be very careful, in searching for the somatic basis of acute insanities, to bring only such symptoms in relation to the lesion as were manifested shortly before death. The results of so-called researches by American asylum superintendents, referring all insanity to coarse lesions and causes, were declared unworthy of serious refutation or consideration. The writer concluded by stating that the real signification of negative pathological evidence in insanity was to direct our attention to more comprehensive methods of research. Organic chemistry, teratology, embryology, and dynamics would probably reveal as valuable results as the exclusively followed histological method.

DR. E. C. SEGUIN gave notice of a proposed amendment to the Constitution to the effect that hereafter all matters of business be attended to and decided by the Council, subject to the control of the Association.

There being no further business, the Association was declared adjourned, to meet in New York on the third Wednesday in June, 1879.

Correspondence.

VOMITING IN PREGNANCY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—I noticed, in a recent number of THE RECORD, a *résumé* of an article by Dr. M. O. Jones, of Chicago, relating to the treatment of vomiting in pregnancy.

His recommendation of the local application of caustics calls to mind a case I successfully treated by that means.

Mrs. M——, a symmetrically built and healthy young woman, has been pregnant four times. Vomiting commenced in about three weeks from each conception. This unpleasant symptom continued persistently during each pregnancy, until she aborted, or was delivered at term.

Vomiting was so easily provoked and her general health so soon suffered, that she could do little more than pass the time in an easy-chair, listlessly gazing out of the window, vomiting frequently, and scarcely able to partake of half a meal a day. During one pregnancy, which terminated in abortion at three months, her case became desperate, she being confined to the bed, and vomiting about every ten minutes, except when decidedly under the influence of morphine (hypodermically).

For two weeks all food and drink were rejected, nourishment being received by enemas.

During this time not a drop of anything was taken into her stomach, and still retching and bilious vomiting continued. She was finally relieved by the use of Saratoga water, which, of the numerous remedies tried during her several pregnancies, was the only one that afforded any satisfaction.

Becoming pregnant the fourth time, and receiving no benefit from Saratoga water, Mrs. M. was very much depressed, declaring that she would sooner die than pass another eight months of torture; for the nausea was even more severe than at an equally early period in previous pregnancies.

Realizing the necessity of offering her some relief, and having somewhere seen local treatment suggested, I resolved to try it, even at the risk of exciting abortion. Therefore I made a very thorough application of a saturated solution of nitrate of silver to the cervix uteri.

That night her sleep was undisturbed, vomiting ceased, and did not return during the balance of gestation, except as an occasional morning sickness, which was so slight as to give little annoyance.

Indeed, her health and spirits were never better or more buoyant than during the period of gestation following the application of silver.

A. D. FELTON, M.D.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 30 to July 6, 1878.

TAYLOR, M. K., Capt. and Asst. Surgeon. Leave of absence extended four months. S. O. 142, A. G. O., July 2, 1878.

CAMPBELL, A. B., Capt. and Asst. Surgeon. Granted leave of absence for two months. S. O. 139, A. G. O., June 28, 1878.

AINSWORTH, F. C., 1st Lieut. and Asst. Surgeon. Relieved from duty in Dept. of Arizona, and assigned to duty in Dept. of California. S. O. 142, C. S., A. G. O

SKINNER, J. O., 1st Lieut. and Asst. Surgeon. Assigned to duty as Post Surgeon at Camp Bowie, A. T. S. O. 66, Dept. of Arizona, June 19, 1878.

TAYLOR. M. E., 1st Lieut. and Asst. Surgeon. Assigned to duty as Post Surgeon at Fort Bliss, Texas. S. O. 53, Dist. of New Mexico, June 21, 1878.

ROSSON, R. L., 1st Lieut. and Asst. Surgeon. Assigned to duty as Post Surgeon at Fort Yuma, Cal. S. O. 66, C. S., Dept. of Arizona.

REYNOLDS, FRANK, Capt. and Asst. Surgeon. Retired from active service in conformity with Sec. 1251, Revised Statutes. S. O. 139, C. S., A. G. O.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 6, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.
June 29, 1878....	0	2	74	3	23	31	0
July 6, 1878....	0	5	56	2	28	24	0

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.— At a stated meeting, held May 27, 1878, it was voted to grant certificates of membership to the following gentlemen: Drs. J. A. Breakell, W. M. Kemp, C. H. H. Sayre, E. W. Lambert, S. Hahn, H. Ruhl, R. A. Joyce, T. Kenne, C. Edel, R. L. Dieffenbach, E. P. Brown, W. C. Jarvis, J. Neil, J. Knight, H. M. Brandis, E. Frankel, G. B. Hickock, E. A. Banks, D. E. McSweeny, H. S. Carter, D. Froelich, J. B. Obendorfer, J. H. Dew, R. S. Gage, J. J. Friedrich, G. L. Newcomb, G. W. Chamberlain, A. S. Newcomb, T. J. Loughlin, H. W. Howland, L. Stern, G. Ford, W. Hasslock, S Feenberg, I. P. Davis, A. Hugart, C. P. Kreizer, B. Seignitz, and D. Baronwitz.

GLYCERINE AS AN INJECTION PER RECTUM FOR CONSTIPATION.—Dr. L. W. Hanson, of Davison's Station, Michigan, writes: I do not remember seeing in any of the journals or elsewhere, any mention made of the use of glycerine as an injection for the relief of a constipated condition of the bowels. For the past two years I have been in the habit of using it in all classes of cases where I desired to produce evacuation of the bowels by enema, whether of acute disease or habitual constipation. I use it, one part of glycerine to six, eight, or ten parts by measure of tepid water, and find it to act more pleasantly and efficiently than any other agent ever used for the purpose.

GLANDERS.—Both the States of *New York* and *Massachusetts* have passed legislative acts relating to diseased animals, especially to those affected with glanders and farcy. The necessity of such legislation is strongly pointed out by Dr. A. Liautard, V. S., in the *American Veterinary Review*. From statistics made in his official capacity, he offers the following interesting statement relating to the existence of glanders in some of the stables of New York City. In one, at a single visit, 8 horses were condemned; in another, 18; in a third not less than 25; and at subsequent periods a total of 20 more. In one establishment its president said that the loss last year from glanders and farcy alone, had been 200 horses. Estimating these at a low rate, say, $125 a piece, a loss of $25,000 accrued to the Company. Dr. Liautard points out that the great danger is not in well-developed cases of glanders, for such a condition of the animal is of course easily recognized. It is in the form of latent glanders, or laryngeal glanders as the French call it, when all the well-known symptoms are scarcely apparent, but the disease still equally contagious. In this form, where perhaps but little symptoms exist, and where, in many cases, no apparent lesions can be detected, except by careful observations, the animals can have all the appearance of perfect health, and still be a perfect centre of infection.

THE AMERICAN VETERINARY HOSPITAL have published their Third Annual Report. It shows a steady increase of public appreciation in the objects of the Institution. In 1876 the whole number of animals treated were 731; in 1877, 1,061; while with the year ending March, 1878, 1,478 animals were entered; of these, 30 died, 28 were destroyed, and 1429 were relieved or cured. Three hundred and twenty-four operations were performed, embracing those from simple venesections to hyo-vertebrotomy. One feature of this Institution is the establishment of "free clinics," held every Wednesday and Saturday at 2.30 P.M. These clinics are intended to afford the poor, who cannot remunerate the services of a good veterinarian, the opportunity of obtaining relief for their suffering animals. Out of the 286 patients thus *gratuitously* treated, 80 were operated upon.

ERGOTIN IN ABORTION.—Dr. A. Noel Smith, of Dover, N. H., in the course of some remarks upon the treatment of abortion, writes: I place great reliance upon hypodermic injections of ergotin in every case of uterine hemorrhage, during abortion, even though only moderately grave. Small abscesses may sometimes ensue at the seat of puncture, but rarely, at least, in my experience. I usually employ the following formula:

℞ Ergotini.....gr ij.
Spts. vini rect.....
Glycerinæ..... } āā f ʒ ss.

M. Of which I inject gtt. v., equivalent to gr. $\frac{1}{6}$ of the ergotin.

"THE BRAIN," A QUARTERLY JOURNAL OF NEUROLOGY.—We have just received the first number of *The Brain*, a London Quarterly Journal of Neurology. It is edited by Drs. Bucknill, Crichton Browne, Ferrier, and Hughlings-Jackson, and promises to sustain a high reputation.

CEREBRAL TUMOR WITH SYMPTOMS SIMULATING HYSTERIA.—Dr. A. Hughes Bennett reports a case of cerebral tumor with symptoms simulating hysteria, and which had been diagnosed as aggravated hysteria by one of the most distinguished authorities in nervous diseases in Europe. The symptoms were as follows: a sudden attack of blindness and deafness, from which the patient recovered in a few days. Three months afterwards a second attack of permanent blindness, accompanied with continually increasing deafness and paraplegia of the lower limbs. These symptoms lasted four months, when the patient became unconscious and delirious, and died in a few days. Ordinary hysterical symptoms were manifested during the entire period of the disease. A tumor as large as a hen's egg was found in the substance of the right hemisphere.—*The Brain*, April, 1878.

Original Lectures.

ON SYMPATHETIC OPHTHALMIA.

A Clinical Lecture delivered at the Medical Department of the University of the City of New York.

By D. B. St. JOHN ROOSA, M.D.,

PROFESSOR OF OPHTHALMOLOGY.

(Reported for The Medical Record.)

SYMPATHETIC OPHTHALMIA—ATROPHY OF THE OPTIC NERVE—CAUSES OF THE ATROPHY—TRAUMATISM—TOBACCO AND RUM—SYPHILIS—EXPOSURE TO BRIGHT LIGHT, ETC., ETC.—SYMPATHETIC INFLAMMATION OF THE UVEAL TRACT—TREATMENT.

Gentlemen:—I will to-day interrupt the regular order of study for the purpose of showing you an important case.

Last week, you will recollect, I lectured upon the methods of examining the eye. We shall now bring into requisition some of the knowledge then obtained, and endeavor to find out, if possible, from external examination, what the affection is which causes this man to be blind. The history of his case is as follows:

He is forty-five years of age, and a farmer. When fourteen years old he was one day holding a board, through which his father was attempting to drive a nail; the nail glanced and struck him in the left eye. On account of the injury thus received he remained in the house about ten days, and during that time he was unable to see with the injured eye. It is fair to suppose that considerable inflammation occurred. At the close of the inflammatory action he had only perception of light from the injured eye, and it was limited to one part of the retina; light could be perceived only when he looked in a certain direction. Subsequently he attended school as usual, was able to read and write, etc., with the uninjured eye, without inconvenience, and since reaching manhood he has been able to see with his right eye sufficiently well to transact with ease all business incident to his occupation.

About three or four years ago he first observed that he was not able to see so well in the night as in the daytime. That fact showed that the perceptive power of the retina was blunted. The man found greater difficulty in seeing in the night simply because there was not sufficient light. The perceptive power of the retina, or the conducting power of the optic nerve-fibres, was so lessened that they could not do their work unless they were exposed to more than the ordinary quantity of light.

Some eight or ten months ago he first began to notice that he had difficulty in seeing to read and write, and he now comes to us almost entirely blind. He can, in fact, as you see by the tests, only distinguish light from darkness. Here, then, is a healthy man, who, a certain number of years ago, received an injury of the left eye that destroyed its sight. Three or four years ago he first noticed failure in the sight of the right eye, and that failure made its appearance and progressed without pain. The suspicion then at this stage of the examination is aroused, since there is no history of injury of this eye, that he is suffering from *sympathetic disease* of the right eye.

In the next place, we wish to know what the condition of the left eye is. As we look upon it we see that the eyeball is smaller than the right, and that it is also flattened; the cornea is opaque, and is smaller than in the right eye; the conjunctiva of the lid is very vascular, and so also is that which is upon the eyeball. The eye is irregular in shape, and has undergone such changes in its interior that it has become folded or wrinkled, exactly in the same manner as if my handkerchief was made into the shape of a ball-cover and was filled with a tenacious fluid. As long as the handkerchief is filled completely it will form a complete globe; but if by any means a portion of the fluid is made to disappear, the cover becomes wrinkled. This is what has happened to the left eyeball of our friend: some change has occurred in the interior which has so affected the coats of the eyeball as to give to it this external appearance. Besides this, the cornea is opaque and has a scar upon it.

Let us next see what we can discover by an external examination of the right eye. First, we notice that the cornea is perfectly transparent; the iris and the conjunctiva are sound. There is no evidence whatever of disease in the external portions of the right eye.

[Before this statement had been made by the lecturer, three of the class were called upon to give an opinion as to the appearance of the outer part of the eye. Two of them pronounced the cornea and iris to be diseased, while the third formed a correct estimate of their appearance.]

You observe, gentlemen, that some of you had put yourselves in such a prejudiced frame of mind that you were unable to give a correct opinion, although I asked you to compare the appearance of this man's cornea and iris with my own, in neither of which is there disease. Before you examined the case you believed there was disease in the outer parts, and hence you found it. To cease to form opinions before a case is thoroughly examined, is one of the most difficult things in the investigation of disease. It is, however, an essential to him who would be an intelligent and skilful practitioner. Although the suspicion of sympathetic disease was excited by the history, the objective examination affords us no evidence, or at least none of the usual evidence of such disease. There is no lachrymation, no photophobia, no iritis. These are the usual marks of a sympathetic ophthalmia; but here is a quiet eye, and one without history of inflammation.

The patient cannot count the fingers on my hand; he cannot even see my hand, although he makes an effort, and he thinks he can. The disposition of the human patient to exaggerate his visual power is as marked as that of the consumptive to say that he is "now going to get well." Gentlemen, you will need all your power of objective observation to prevent you from accepting the patient's statement instead of the results of your own examination. Patients who are entirely unable to see fingers, or even a hand, will insist that they are able to see both. They hold up their own hands, of course knowing that they are doing so, and then imagine that they see them. When the right eye is examined by placing a lighted lamp in front of it, you see that he has quantitative perception of light—that is, he can tell light from darkness—but he has no qualitative perception of light. He is unable to see even very large objects by any light.

What has brought our friend to this condition? If we had lived in the olden time, our investigation would at this point cease. But we are now able to go farther, and to determine what the nature of the affection is that I have just given the general name of sympathetic disease. This is done by means of the ophthalmoscope. An ophthalmoscopic examination has already been made, and to as many of you as is possible will be given the opportunity by Dr. Ely of

observing the change which has occurred in the interior of the eye. The examination has revealed atrophy of the terminal extremity of the optic nerve. As seen by the ophthalmoscope, in this case the optic papilla, or optic disk, is very white; it is excavated, and it has scarcely any capillaries. These are the signs of atrophy of the optic nerve, and are to be appreciated only by the use of the ophthalmoscope. As far as can be determined, the remaining portions of the eye are perfectly healthy. Here, then, is a condition which explains this man's blindness: the fibres of the optic nerve which supply the retina have undergone atrophy.

CAUSES OF ATROPHY OF THE OPTIC NERVE.

The question now arises, What has caused the atrophy of the optic nerve in this case? Atrophy of the optic nerve arises from a large variety of causes.

If a soldier in battle receives a *gunshot wound* through his orbit, cutting off the trunk of the optic nerve, atrophy will of course follow.

Again, a man may use *tobacco* and *rum* to such an excess as to give rise to an insidious inflammation, that may be followed by atrophy. The neuritis in this case is perhaps excited by blood-poisoning.

A man may be exposed to a *bright light*, such as the exposure received by roofers, which so affects the eye as to develop a neuritis that will be followed by atrophy.

A man may have *syphilis*, and, in consequence of destruction of the nutritive qualities of the blood produced by that disease, an optic neuritis may be developed which is liable to be followed by atrophy.

There are many cases of atrophy of the optic nerve, however, which have been developed apparently without cause. That is, with our present knowledge and means of investigation, we are not able to find the cause. Anything, however, which can produce neuritis—for example, meningitis extending along the sheath of the optic nerve to the nerve itself—may be followed by atrophy.

Prolonged or sudden anæmia may deprive the trunk of the optic nerve of the requisite amount of nutrition, and atrophy may follow. *Concussion of the brain* may be followed by atrophy of the optic nerve, and probably of the acoustic nerve.

But we come back to the question, what has caused the atrophy of the optic nerve in this case? We can only say it is probably a *sympathetic trouble*. This is not saying very much, but it is because of our lack of knowledge that we use such a general term. There is a doubt in many minds whether an inflammation of the optic nerve is ever a sympathetic trouble. Such authorities would say that the atrophy in this case is not sympathetic—not dependent upon disease of the fellow eye, but that it is a mere coincidence that it has occurred in this case. Sympathetic disease with them is always an irido-choroiditis. I think the evidence is rather against this view. I am inclined to believe that atrophy of the optic nerve may be one form, although a rare one, of sympathetic ophthalmia.

We know that the optic nerve does not transmit sympathetic trouble, because the optic nerve of the affected eye has been divided in cases of injury, thus "put out of play," as the Germans say, and yet inflammation has extended to the other eye. Sympathetic inflammation probably extends through the nerves which supply the ciliary region coming from the fifth pair and the sympathetic. We know that inflammation is propagated through these nerves, because injuries in the ciliary region, such as wounds, presence of foreign bodies, cicatricial contractions, are very commonly—indeed, I might say almost invariably—followed by sympathetic inflammation; whereas, injuries of the eye not involving the ciliary region are not nearly so apt to be followed by such inflammation.

I am not to be understood as saying positively that this is beyond all question a sympathetic condition, for sympathetic neuro-retinitis, followed by atrophy, is, as I have already said, rare.

SYMPATHETIC INFLAMMATION OF THE UVEAL TRACT.

Another, and much more common form of sympathetic trouble, is inflammation of the iris, inflammation of the choroid, and inflammation of the ciliary body—in other words, inflammation of what is called the *uveal tract*. The iris, the choroid, and the ciliary body constitute what is known as the uveal tract, and you will please remember that this is the great nutrient portion of the eyeball.

The nutrition of the optic nerve in the right eye in this case has been affected, probably, in consequence of the propagation of ciliary irritation from the other eye. It is in this manner, probably, that this man's blindness has been produced.

What can we do for him? But very little. The atrophy has occurred; the tissue is destroyed; the capillaries do not exist; the nutrition of the optic nerve has been removed. The prospect for giving this man vision is exceedingly slight. It would be a perfectly justifiable operation to remove what remains of the left eyeball, which is, perhaps, a slight source of irritation to the other eye; yet I cannot promise that he will recover any sight as a result of the operation, or even retain what he has.

I should think that, perhaps, the chances of improving the sight of the right eye by removal of the left were about one in ten thousand. I am unable to see how changes can occur in this optic nerve that will allow it again to communicate luminous impressions. This is not an operation which, under these circumstances, the surgeon should urge, but a plain, truthful statement should be made to the patient, and then he should be allowed to make his own decision. Were I in this man's situation, I should take the trifling chance which the operation offers, and submit to its performance. I have seen cases, in which atrophy of the optic nerve had advanced to such an extent that scarcely any capillaries existed, so much improved by the use of strychnia, that capillaries again appeared upon its surface. I have seen such cases in my own and in the practice of other gentlemen. If, therefore, I should remove this eyeball, strychnia would enter into the subsequent treatment of the case.

How would the case be altered, had the patient more perception of light, if there were lachrymation, and inflammation of the iris and the choroid? Then I should urge the operation; and if the patient was a minor, and I was responsible, I should put him to sleep and have the eye removed, whether he was willing or not.

If he had sympathetic *irritation*, manifest by lachrymation and what is commonly known as weakness of the eyes when they are called upon to work, I should be even more urgent regarding the removal of the eyeball, and should feel quite safe in promising him that he would fully recover his sight; but when the inflammatory process has become established, I should be very guarded in an opinion given with reference to the ultimate results of the operation, for you are not at all certain that you will cut off the inflammation.

Thus, gentlemen, you see the importance of a case in which injury has been done to an eye by a foreign body. If a foreign body enters the eye, every reason-

able attempt should be made to remove it; but if such efforts fail, the eyeball should be enucleated. You are not to allow a person with inflammation of the eyeball from injury, or from the presence of a foreign body, to go from your observation with a weeping eye upon the opposite side. Such cases are serious, and you should give the eyes of such persons the most exact examination, and determine whether or not there is any failure of vision. As long as there is merely lachrymation, as long as there is no inflammation, you may hope by removing the affected eye to save the other.

As soon as sympathetic irritation occurs, immediately remove the eyeball which has been injured. That should have been done in our friend's case, but he has been unwilling to admit that his sight was failing, and now all that remains for him is to decide whether or not he will take the very slight chance offered him by an operation.

[The patient decided not to have the operation performed.]

Original Communications.

THE NITRITE OF AMYL AS AN ANTIDOTE TO CHLOROFORM.

By F. A. BURRALL, M.D.,

PHYSICIAN TO THE PRESBYTERIAN HOSPITAL.

In September, 1876, I read a paper before the New York Academy of Medicine on "Nitrite of Amyl as an Antidote to Chloroform," which was afterwards published in the New York *Medical Journal*. In this paper the drug was described, and the experiments which were made by others and myself on the inferior animals were detailed at length, as well as a few instances in which the remedy had been used successfully with man, where death seemed imminent as a result of the inhalation of chloroform. I also mentioned in that paper, that in the New York *Medical Gazette* of June 11, 1870, I had suggested the use of the amyl nitrite "in the threatened syncope from chloroform," and that this, as far as I knew, was the first suggestion of the kind which had been made. The remedy seemed worthy of further trial, and the paper closed by recommending that "when chloroform is used, the nitrite of amyl should be at hand as one of the remedies whose efficiency is to be tested in case of impending danger." *

Seventeen deaths were recorded in the medical journals of 1877 as having occurred in connection with the administration of chloroform. Perhaps more were reported, but these are all which I found after a rather careful examination. It cannot be supposed that this represents the entire annual mortality from this treacherous anæsthetic, but even this number is large enough to make us wonder that so many physicians still regard chloroform as safe. In only one of these cases is there any mention of the employment of the nitrite of amyl, and here the patient's constitution was greatly shattered. A post-mortem examination showed "an advanced stage of fatty deposition upon and degeneration of an enlarged heart. There was also a layer of fat on the pericardium, and old pericardial adhesions. The walls of the heart were pale and flabby; that of the right ventricle was thinner than normal; the cavities were dilated and empty. The valves were perfectly healthy, but the aorta was atheromatous. The lungs were extremely congested, and the base of the right hepatized and bound down by firm adhesions. The apices of both contained numerous nodules of caseous matter, which in several places had softened into small vomicæ. The liver, kidneys, and spleen were enlarged and congested. There was chronic gastritis and inflammation of the mucous membrane of the ileum."

It cannot be said that a case like this, in which the foundations of life were so thoroughly undermined that the body was already leaning towards the grave, could be a fair one to test the conservative properties of the amyl nitrite.

Additional testimony has, however, been furnished during 1877 in favor of the nitrite of amyl as an antidote to chloroform. A very interesting case, in which chloroform-poisoning was averted by this drug, was published in the New York MEDICAL RECORD of August 4, 1877, and is probably familiar to many of the readers of the present article. It will not, therefore, be necessary to give it in detail, as it is easily accessible to any who may wish to read it. The closing sentences of the article, however, give in decided terms the opinion of the writer, and are as follows:

"In looking at the order of symptoms, I cannot help forming the opinion that had it not been for the nitrite of amyl, this poor patient would assuredly have died. I have never seen either in surgical or obstetrical practice any one in such imminent peril. I am thankful to say I have never witnessed a case of death from chloroform, but from the accounts published in the medical journals, both I and my friend inferred that in the present instance there was syncope arising from paralysis of the heart, and that this was met by the nitrite of amyl, which in accordance with its physiological effects gave a direct fillip to the arrested circulation."

Dr. Lewis S. Pilcher, in his report on "Croup and Tracheotomy in the City of Brooklyn," which was made to the Medical Society of the County of Kings, April 17, 1877, refers to two cases of tracheotomy "in which dangerous chloroform narcosis complicated the operation. Nitrite of amyl was used with apparent benefit in both instances."

These cases occurred in the practice of Drs. George R. Fowler and Frank W. Rockwell, and I extract from letters received from these gentlemen such portions as refer to the use of amyl nitrite, without unnecessary details of the cases. Dr. Fowler writes: "The case was one of diphtheria, the disease having invaded the larynx. I saw it only when suffocation was imminent, and the operation was done solely with a view to euthanasia. In the midst of the operation, and while the child was fully under the anæsthetic (about six drachms having been used), a sudden pallor came over the child's face, the chin dropped, the pupils became widely dilated, the pulse became imperceptible at the wrist, and efforts at respiration ceased.

"At this juncture I seized a bottle of the nitrite of amyl, which I had provided as a part of my outfit for the operation, and applied its open mouth directly to the child's nostrils, at the same time directing my assistant to keep up artificial respiration by Sylvester's method. The lips and face assumed the rosy hue of health, the pulse appeared at the wrist, and respiration became re-established. The operation was then safely completed."

Dr. Rockwell writes: "The case you see hardly

* F. A. Reichardt, chemist of this city, has improved upon the glass capsules of amyl nitrite formerly in use, by making them thicker and less friable. Those first made were liable to break from mere elevation of temperature, but this defect has been rectified. By means of these the drug may be easily carried on the person.

bears upon the subject in hand, as it was not, properly speaking, one of *chloroform narcosis*, although the asphyxia may have been largely due to the presence of the anæsthetic in *addition* to the absence of oxygen.

"I have certainly seen amyl relieve impending asphyxia during the administration of chloroform, notably in a case of my own, where, while giving it freely in puerperal convulsions, the patient suddenly became cyanotic and ceased breathing. I believe the amyl in this case saved my patient's life."

The case which Dr. Rockwell does not consider as "properly speaking one of chloroform narcosis," was that of a boy, aged three years, suffering from diphtheria, upon whom it was considered necessary to perform tracheotomy. "As Dr. Bunker" (the attending physician) "was obliged to administer the chloroform, I had to rely upon the assistance of one of the nurses in the Institution, and owing to her insufficient aid the incision in the trachea was for a moment lost. Though almost instantly found and reopened, the child was suffering from complete asphyxia when the canula was introduced. Chloroform was at once suspended, and nitrite of amyl administered. Brandy ℥ xv. was given subcutaneously, and the child soon rallied."

I here subjoin a tabular record of these cases which have come to my knowledge, in which amyl nitrite has been used as a remedy for chloroform narcosis:

Physician's Name.	*Symptoms of Attack.*	*Anæsthetic used.*	*Amyl Nitrite. How Administered.*	*Nature of Attack.*	*Result.*
R. H. Hinton.	Pallor, apnœa.	Squibb's chloroform.	gtt. v. to nose and mouth.	Syncope.	Flushing of face, beating of carotid recovery.
C. Bader.	Pallor, deep insensibility, defective pulse and respiration.	Mixed alcohol, ether and chloroform.	gtt. iij. over nose and mouth, on lint.	Syncope.	Flushed face, quick pulse, returning sensibility.
C. Bader.	Sudden faintness with blue lips, blood turning black, imperfect respiration.	Chloroform.	gtt. iij. inhalation.	Asphyxia.	Same result as preceding.
C. Bader.	Stertor, blueness of face.	Chloroform.	gtt. x. over mouth and nose, on lint.	Asphyxia.	Blueness gave way to good color.
G. R. Fowler.	Sudden pallor, dropping of chin, dilatation of pupils, absence of pulse and respiration.	Chloroform.	Applied open-mouthed bottle containing amyl to child's nostrils. Artificial respiration.	Syncope.	Lips and face became rosy, pulse returned, respiration re-established.
F. W. Rockwell.	Cyanosis, apnœa.	Chloroform.	Details not given.	Asphyxia.	Dr. considered that "the amyl in this case saved my patient's life."
Case from British Med. Journal, Aug. 18, 1877.	Pulse stopped, grasped, foam on lips, nausea, jaw rigid.	Duncan & Flockhart's chloroform.	Poured some nitrite of amyl on lint and held to nostrils.	Syncope.	Flushing of face, return of pulse and respiration.

An additional case is referred to in the N. Y. Med. Record of May 25th, 1878, p. 420).

An analysis of these cases shows that not only is the nitrite of amyl to be used to avert the syncope induced by chloroform, but also the asphyxia. It seems somewhat strange, at the first glance, that the same remedy should be useful in such opposite conditions, but in both there is a tendency to stagnation in some portion of the vital current, and this is apparently overcome by means of that dilatation of the vessels which is caused by the drug.* *The effect which it exerts of overcoming stasis* seems to be its most important function. While in the syncope induced by chloroform the nitrite of amyl exerts its antidotal properties by opening the arterial channels and admitting blood to the brain, in asphyxia the *pulmonary* stasis† is also overcome and arterialization follows.

I have not given in this essay any details of experiments upon animals made with the view of demonstrating the antagonism between chloroform and the nitrite of amyl. These I have already given in medical publications. But I have brought forward a demonstration of such antagonism as shown in the effect of these drugs upon man, to which, of course, experiments upon the lower animals are but a stepping-stone. The practical bearing of this subject, it seems to me, cannot be questioned. It is the aim of medical effort to save life, and this end forestalls all others, and any agent which promises to rescue a human life from impending extinction is worthy of thorough and complete trial.

It is not enough to say that the best method of preventing deaths from chloroform is to discontinue its use. The same argument might be used with regard to alcoholic stimulants, yet, for the present, both will find their advocates. It is the part of the physician and philanthropist to reduce the dangers of both to the possible minimum. With our present knowledge of the antidotal properties of amyl nitrite in relation to chloroform, it is but justice to our patients to have it at hand when chloroform is administered. Not that it should be our sole reliance, but the evidence is too strong in its favor to admit of a doubt that we possess in its prompt and specific action a most valuable ally to our present remedies.

48 West Seventeenth St.

A CASE OF SEPARATE INVESTMENT OF THE PALATO-GLOSSI MUSCLES.

By J. SOLIS COHEN, M.D.,

of Philadelphia.

Mr. H., about 40 years of age, consulted me, December 1, 1877, on account of a peculiarity in his voice, the evident result of overstrain. As he opened his mouth preparatory to a laryngoscopic inspection, I noticed the anomaly depicted in the above illustration, for the opportunity of presenting which I am under obligations to the artistic skill of my friend, Dr. John H. Packard.

The anterior arches of the palate are incomplete upon each side, in consequence of an elongated oval aperture just above their lingual attachments, and which is large enough to disclose the anterior surface of the posterior arch behind. The inner and slender boundary of each abnormal opening is the main free portion of the palato-glossus muscle on each side respectively, the investment of the muscle being separate, instead of forming part of a continuous palatine

* Berliner klin. Wochenschrift, Nos. 25 and 26, 1874.
† British Medical Journal, Jan. 1, 1876, p. 19.

fold, as in the normal subject. The entire palate, the tonsils, and the pharynx are free from disease; and the peculiarity of phonation under which the patient

labors is in no wise dependant upon the anomalous conformation of his palate.

Were it not for the position of these openings, they might have been readily mistaken, at first sight, for ulcerative perforations, the result of specific processes.

The only other recorded case of the kind, of which I am aware, is one reported by Dr. Wolters, of Göttingen (Henle and Pfeufer's *Zeitschrift für rationelle Medecin*, 1859, 3d series, 7th vol., p. 156, illustrated on plate IV.), for a knowledge of which I am indebted to Prof. Harrison Allen, whose attention I had drawn to the present case.

PARACENTESIS OF THE PERICARDIUM AND THORAX.

By F. PEYRE PORCHER, M.D.,

ASSOCIATE PHYSICIAN CITY HOSPITAL, CHARLESTON, AND PROFESSOR OF CLINICAL MEDICINE AND MATERIA MEDICA AND THERAPEUTICS, IN MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA.

Cyrus Wilson, æt. 50, was admitted into the City Hospital, Charleston, under my care, May 1, 1878, with anasarca. He had been an inmate five years previously, but left without being relieved of his dropsy.

Symptoms: Very weak; compelled to sit propped up in bed; little appetite; respiration difficult, quick and short, pulse 104, weak, quick, oppressed—not being felt in left arm on account of swelling; face and right arm not much swollen; œdema of lower extremities; complete dulness with very slight and deep-seated respiratory sounds over right lung anteriorly and posteriorly—dulness in front extending to an inch above the nipple—some dulness and diminished respiration at back of left lung also. Liver, as is usual in such cases, torpid, tender to touch, and slightly enlarged. Urine examined—no albumen.

Treatment: Nourishing food, stimulants, with calomel, squills, digitalis, and ipecac.

May 6th.—In such a condition, with the area of precordial dulness over four inches in diameter and reaching above the left nipple, with the sounds of the heart masked and feeble, feeling certain that no hypertrophy existed, I determined to use paracentesis for his relief. The trocar of the hypodermic syringe was entered into the centre of the area of dulness near the fifth rib, inside of the nipple, and about two inches from the border of the sternum. A drachm of sero-sanguinolent fluid was withdrawn from the pericardium, which coagulated under heat and nitric acid.

This afforded immediate relief; the respiration became less frequent and the pulse slower, as testified to by those present, Drs. Rose and DeSaussure, and Messrs. Rhett and Edwards, two of these gentlemen being the house physicians.

On May 7th, respiration and general condition improved; pulse 100.

In order to test the value and at least the innocuousness of the procedure used, I allowed the patient to remain undisturbed till the 14th, when I found the pulse 96, and I determined to remove the fluid from the right pleural cavity, using the hypodermic syringe to assure myself of its presence. The long trocar of Potain's(?) aspirator was then passed into the cavity of the thorax, at a point three inches below the lower border of the scapula, and two inches to the right of the vertebral column. Three pints and three ounces of a red sero-sanguinolent fluid were withdrawn. Pulse at end of operation, 86; respiration, 28.

June 6th.—The breathing becoming oppressed, and there being a reaccumulation of fluid in the pleural cavity, twenty six ounces of fluid were withdrawn by the aspirator, which was of a lighter color and thinner in consistence, with marked relief of all the symptoms. Time will be required to show what will be the permanent results.

Having had occasion several times to perform paracentesis thoracis with the aspirator, I have been in the habit of first using the hypodermic syringe as an exploring instrument to satisfy myself of the presence of fluid. I think this is especially needed where an attempt is made to enter the pericardial sac, more particularly in doubtful cases.

By the simple expedient which I have adopted of entering the fine hypodermic trocar beneath the skin, then creating a vacuum by lifting the piston as the needle passes deeper in, we are enabled to make sure, by the appearance of fluid in the body of the syringe (assuming our diagnosis to be correct), that the point has not entered the lung or the heart itself.

This expedient, which also suggested itself to my assistant, Dr. A. B. Rose, diminishes greatly the risk of this operation.

Awkward.—Said a juvenile daughter of a doctor to her father at the dinner-table the other day, when a well-known druggist and apothecary, Mr. X., was unfortunately present: "Papa! are there *medicine-stores*, where you buy your medicines?"

"Yes, my dear, I buy them of the apothecaries."

"Why, papa! I thought apothecaries sold postage stamps and soda-water, and such things, just as Mr. X. does."

Reports of Hospitals.

NEW YORK STATE WOMAN'S HOSPITAL.

Service of Dr. FORDYCE BARKER.

The following notes are given as illustrating the ordinary run of cases in Dr. Barker's service at the Hospital:

Case I.—*Retroflexion, with Hypertrophy of the Uterus. Probable Periostitis of Sacrum and Cocyx.*—Hannah D——, aged twenty-nine years, is married, but has never been pregnant. Was admitted March 18, 1878, when the following history was obtained:

She began to menstruate when sixteen years old, and has always been regular, though suffering somewhat from dysmenorrhœa. The flow lasts five days. Her bowels are occasionally constipated, but usually are in good condition. She complains of considerable pain in the lumbar and sacral regions, and also, in part, in the hypogastric region. On a physical examination, it was found that the uterus was retroflexed, and that its cavity measured three and a half inches. An Emmet pessary was put in position after the uterus had been restored, and the patient placed on an appropriate tonic and generally-supporting treatment.

On April 1st, the uterus was found to be still in good condition, but the patient still continued to suffer a good deal of pain. From the marked tenderness along the sacrum, Dr. Barker was inclined to think that there was periosteal trouble, though this could not be determined with positiveness. There was a decidedly œdematous condition about the posterior wall of the vagina, and with a view to affecting the probable periostitis, repeated applications of strong tincture of iodine were ordered over its whole surface.

On April 22d the uterus was still in good position, although the pessary had then been removed, and the pain was very much relieved.

She missed one period in April, but the menses returned at the regular time in May, though the flow was not very free, and she complained of a good deal of pain in the back. About this time she was examined again by Dr. Barker, and he came to the conclusion that the external os was too narrow to allow a sufficiently prompt exit for the menstrual blood, and advised that it should be enlarged by incision.

May 24th, the patient was found to be free from pain, and greatly improved in every respect. She stated that she felt much stronger, and that she had gained over four pounds since her admission to the hospital. There was still a slightly loggy feel of the tissues behind the cervix, due, no doubt, to the œdema left after the recent menstrual period. This œdema was apparently caused by the fulness of the uterus at this time. On this day Dr. A. A. Smith, assistant surgeon, made a lateral incision with the uterotome on each side of the *os externum*, afterwards plugging the latter with styptic cotton, and the patient was to be discharged as soon as the parts had healed.

Case II.—*Old Pelvic Cellulitis and Peritonitis: Left Lateral Version.*—Mary S——, thirty-five years old, and married. Has had one child, but no abortions. Admitted to the Hospital, Dec. 25, 1877.

She began to menstruate at the age of fifteen, and has always been regular. The menstrual flow ordinarily lasts three days when she lies in bed, and seven days if she is up and engaged in her usual avocations. The amount is moderate, and it is both preceded and accompanied by a great deal of pain. She was well up to the time of her confinement, which occurred eight years ago, and has never fully recovered her health since then.

An examination showed that the roof of the vagina was very hard and smooth, instead of yielding, and characterized by rugæ, as is the case in the normal condition. There was evidently old pelvic peritonitis and also pelvic cellulitis, which affected the left side principally. In consequence of this, it was found that the uterus was flexed towards the left side, and was in a state of rather firm fixation. Soon after her admission, the application of tincture of iodine all around the cervix, and especially to the roof of the vagina, was commenced, and has been pretty steadily kept up, at intervals of two or three days ever since. At times she complained of pain in both the iliac fossæ, and for a while the constant current was applied over the ovaries and to the cavity of the uterus, though this was not continued for a very long time. Appropriate tonics were given, as the case demanded, and the patient was placed under the best hygienic conditions.

May 24th. Her condition has been very much improved since she entered the hospital, and the uterus is found to be much more freely movable. But, at the same time, she has in the meanwhile had several little attacks of new inflammatory trouble, though these have been of a mild character. When they have occurred, the local iodine treatment has been suspended for the time being. To-day it was noticed that manipulation gave the patient very little pain, while formerly the parts were exceedingly sensitive when any sort of an examination was attempted. The application of tincture of iodine was made to the roof of the vagina and around the cervix, as usual.

Case III.—*Retroversion (first degree); Endometritis, and Granular Vaginitis; Anal Fissure and Hemorrhoids.*—Laura F——, twenty-seven years of age, and single. Was admitted November 14, 1877. She began to menstruate when fourteen years of age, and has always been regular. She has suffered for a long time from dysmenorrhœa, the pain coming on about three days before the flow, and continuing for two days during the latter. For the last five years she has had a great deal of pain in the region of the left ovary, and also a very profuse leucorrhœa. There was found to be endometritis and chronic granular vaginitis, with fissure of the anus and hemorrhoids. In addition to constitutional treatment, impure carbolic acid was applied to the endometrium, a solution of nitrate of silver (forty grains to the ounce) to the vagina, and iodoform to the anal fissure.

About December 1st the endometritis and vaginitis had almost entirely disappeared, although she suffered more intensely than usual at a menstrual period occurring near that time; but towards the end of the month, when the applications were suspended, they both returned and became as troublesome as ever. The treatment was then resumed (iodine being now substituted for the nitrate of silver), and was followed by the same good results as before. In January she complained of great pain in the rectum and the back generally, and suppositories containing five grains of iodoform, one grain of hyoscyamus, and half a grain of belladonna, were ordered. The patient was discharged the first of February considerably improved.

She was admitted again on the 26th of April, and then, with the concurrence of Dr. Barker, Dr. Smith ligated her hemorrhoids. By the 6th of May the ligatures had all come away, and the patient was do-

ing well. The most troublesome features about this case was the vaginitis, which would disappear temporarily under the use of tincture of iodine painted over the entire surface of the vagina, but returned with the same severity after the applications had been discontinued.

CASE IV.—*Old Laceration of the Cervix, with Hypertrophy, Eversion, and Cystic Degeneration of the Injured Parts.*—Eugenia T——, twenty-five years of age; admitted May 9, 1878. She has been married seven years, and has had one child a year after her marriage. Has had none since, and no miscarriages. She always enjoyed good health up to the birth of the child; but since then has suffered continually from pain in the back, and also in the side when making any unusual exertion. Her menses return every two or three weeks: the flow lasting four or five days each time, and being quite free. There is considerable dysmenorrhœa, the pain being worse during the first two days of the menstrual period; and she has leucorrhœa of long standing. The act of walking is always painful to her. Bowels constipated.

A physical examination revealed the above state of affairs.

Dr. Barker expressed the opinion that an operation upon the lacerated cervix was the only thing that would relieve the patient's symptoms, and Dr. Smith proposes to operate as soon as he has prepared the parts by frequent hot-water injections, and puncturing the little cysts upon the surfaces of the laceration, as well as improved the woman's general condition by appropriate hygienic and tonic treatment. All this is in strict accordance with the views and practice of Dr. Emmet, who lays great stress upon the preliminary treatment in these cases, and thinks it almost impossible to obtain a satisfactory result unless this important matter is carefully attended to.

Progress of Medical Science.

THE SURGICAL TREATMENT OF INTESTINAL OBSTRUCTION.—Dr. Thomas Bryant, of Guy's Hospital, in recording two recent operations of his own, states that no cases call for more thought and judgment than those of intestinal obstruction, the difficulty of diagnosis as to the cause being sometimes great, so that the question of operative interference has often to be based upon uncertain grounds. In reference to a diagnosis of the cause, and from a clinical point of view, he divides these cases into *acute* and *chronic*, the acute including strangulation of a portion of the bowel from internal hernia, omental, mesenteric, peritoneal, or fœtal bands, or twists of the intestine (volvulus). The *chronic* arise from inflammatory or cancerous strictures of the small or large intestine; the occlusion of the bowel from the mechanical pressure of tumors; adhesions of the intestines from chronic inflammatory peritoneal changes; and last, but not least, the impaction of fæces. Intussusceptions belong to both divisions, because when *strangulated* they may give rise to acute and when *incarcerated* to chronic symptoms, although the symptoms in their outset are always sudden. Perityphlitis and acute peritonitis, due to perforation of the bowel, may also simulate the acute form. Diagnosis should in all cases be based upon the principle of exclusion.

As to the comparative frequency of these different forms, the post-mortem records of Guy's Hospital show 124 deaths ascribed to them. Of these, 33 were the result of acute internal strangulation from bands, twists, and internal hernia; 76 from chronic obstruction, and 15 from intussusception. Out of the 76 chronic cases, 3 were due to the impaction of fæces; 3 to the mechanical obstruction caused by tumors; 23 to the matting together of the intestinal coils from inflammatory or cancerous disease of the peritoneum or mesentery; and 47 to stricture of the intestine—45 large and 2 small. Of the 45 cases of stricture of the large intestine, the seat of the disease was in the rectum and sigmoid flexure in three-fourths, and in the transverse colon in the majority of the remainder, it being exceptional to meet with stricture in the cæcum or ascending colon. The symptoms of *acute strangulation of the bowel* are sudden and definite onset of the illness, severe paroxysmal central pain, attended by sickness or more or less collapse, constipation, inability to pass wind downwards, and hiccough occasionally; also scanty urine, or even its suppression, and visible coils of distended bowels. There will be no abdominal tumor, tenesmus, or hemorrhage from the bowels. Even with these symptoms, it will be difficult to diagnosticate the exact cause of the strangulation, whether from internal hernia, twist of the bowel, or strangulation by a lymph-band stretching across the gut.

The chances of cure by natural means are very slight, and probably are about equal to those of ordinary strangulated hernia when left to itself, for these do occasionally free themselves when left alone. Since the operation of ovariotomy has shown that the exposure of the healthy bowel is not of itself a fatal measure, there is good reason to suppose that in the cases analyzed a good proportion might have been saved by a timely operation. Dr. Fagge, in Guy's Hospital Reports for 1868, says, "that there might, in many of the cases he analyzed, have been no little difficulty in finding a band among the distended coils, but I regard the facts derivable from our post-mortem records as indicating no insurmountable obstacles to the success of an exploratory operation in the great majority of the cases of true internal strangulations which are to be found in these records." Dr. Brinton, in his analysis of 600 cases, points to the same conclusion. The operation should not, however, be adopted as a *dernier ressort*, any more than herniotomy, but should be performed as early in the case as the diagnosis will justify.

In *chronic intestinal obstruction*, the clinical history is very different from the acute. It will usually be found that there has been for some time abdominal pain of some kind; some difficulty in obtaining a movement of the bowels; or in the act of defecation some discharge, probably of glairy mucus, of pus or of blood, separately or combined, at uncertain intervals; and finally, some change in the form and character of the stools, the motions at one time being liquid and loose, at another hard and marble-like, while at intervals they are pipe or tape-like. But acute symptoms may be grafted on to chronic ones, so that in addition we may have abdominal tympanitic distention, and probably pain; possibly visible peristalsis, nausea, vomiting, hiccough, and borborygmus. We then safely come to the conclusion that the case is one of chronic obstruction; that it is either stricture of the colon or rectum; the mechanical pressure of a pelvic or abdominal tumor, hydatid, ovarian, or cancerous; the matting together of the intestinal coils, from old and chronic inflammation of the peritoneum or mesentery, or from cancerous disease; or last, but not least, fæcal accumulations. There are other causes, such

as adhesion between the bowel and a hernial sac, or some part of the abdominal parietes, etc., but they are rare. The results are necessarily fatal, through peritonitis or exhaustion, if the obstruction is not overcome.

Diagnosis of these chronic cases is not an easy one; if in the rectum, it can easily be found out; if in the sigmoid flexure, Simon's method may answer. When there is a tumor to the left of the umbilicus, there is probability that the disease is in the colon, but beyond these guides little can be determined even by the passage of long tubes, by palpation, percussion, or injecting fluid into the colon.

Fortunately pathological knowledge gives a series of facts upon which the surgeon may rely with confidence. Statistics show that there are four classes: 1. Where there is fæcal impaction; 2. Mechanical pressure of tumors; 3. Contractures; 4. Strictures. The two first classes are comparatively infrequent. Contraction is the cause of obstruction in the small intestines, stricture of the large, and it is the most common affection of the four. The clinical history of the two classes of cases differ. In the former the symptoms are attacks of griping, colicky, abdominal pain, irregular and incomplete intestinal evacuations and the painless discharge of healthy motions. In the latter there is mostly an absence of abdominal pain beyond that due to distention, more or less complete constipation alternating with looseness of bowels, the occasional or frequent mixture of mucus or blood and painful defecation. In "contraction," when sickness exists, it will be passing and lasting only during the attack of colicky pain. In "stricture" it will occur only towards the close of the disease, when the obstruction is more complete. In "contraction" the abdomen probably will not be much distended, and only during the attack. The distention, moreover, will be central and hypogastric. In "stricture" the abdomen will to a certainty be distended, and the distention will be lumbar and epigastric. Large coils of bowel will also be visible, with peristaltic movements, the visible peristalsis in both cases being due to the chronicity of the affection, and consequently the hypertrophy of the bowel from overwork.

Now, as for the location of the seat of trouble. If the symptoms have pointed to disease of the large intestine, we know by statistics (101 cases from Guy's and Middlesex in which the disease was in the sigmoid flexure or rectum in 78, in the colon or its flexures in 19, and about the cæcum in 7) that three-fourths of the cases are below that point of the bowel which would be opened by left lumbar colotomy, which operation is the one which should usually be done. Right colotomy is applicable when the exact position of the stricture cannot be made out.

As for contraction, much may be done by judicious medical means, by laxatives, those of an oily kind being the best. When these means fail, "enterotomy" should be done. It consists in opening the small intestines in the right or left iliac fossa, and so establishing an artificial anus.

It is also applicable in all other cases of obstructions, chronic or acute, where the weight of evidence in the former suggests the probability that the stricture or obstruction is above the ascending colon, and in the latter where the operation of laparotomy is set aside.—*The Lancet*, May 11-18, 1878.

TREATMENT OF GASTRALGIA BY THE STOMACH-DOUCHE.—Dr. Malbranc reports a case of obstinate gastralgia, that was treated successfully in Prof. Kussmaul's clinic in Strasburg, by the stomach-douche, combined with the faradic current. The patient, a woman ætat 22, had suffered for four months from severe dyspepsia, and for nearly three months from intense gastralgic attacks, which could only be controlled by morphine. When admitted to the hospital, she was greatly emaciated, and so weak that she was scarcely able to stand. Three or four subcutaneous injections of morphia had to be given daily, in order to control the pain. Various methods of treatment were tried without result, until finally the stomach-pump was resorted to, under the use of which the patient began to improve. The œsophageal catheter was introduced early every morning, and the stomach washed out with warm carbonic acid water; at first, a little over half a pint of the water was used daily, but after a short time, from two to three quarts were used at a sitting, the stomach being filled and emptied several times. The water that flowed from the stomach after the first operation was almost clear, and only slightly acid, and contained a few masses of fresh mucus. After three weeks of the treatment, the patient could eat a varied diet, and was able to go about in the open air. Every time the bowels moved, however, which was only when a clyster was administered, the gastralgic pains again became severe, and morphia had to be administered. To relieve this constipation, Prof. Kussmaul then resorted to electricity. A catheter was armed with a wire, so as to form an electrode, which was introduced into the stomach every morning a few hours after breakfast, and a strong induction-current was made to pass for five minutes through the half-filled stomach and the abdominal walls. The other electrode was moved about so that all the abdominal muscles were exercised in turn. On the day the faradization was begun, the patient had an almost painless passage, and every morning afterwards she had a spontaneous, natural, and painless passage, soon after rising. After four weeks of treatment by the douche, and one week by electricity, she was discharged cured.

The positive diagnosis in this case could not be made, but the gastralgia was at all events the most prominent symptom. As the stomach contained but little mucus, and there was also but little flatulence and acidity, the favorable action of the douche must be ascribed solely to the quieting local action of the warm water and of the carbonic acid gas it contained. The influence of the faradic current, transmitted from the inner surface of the stomach through the intestines, was also in this case most striking. Prof. Kussmaul has repeatedly cured or relieved severe hyperæsthesias and cardialgias, particularly those left after the cicatrization of gastric ulcers, by the stomach-douche used in the morning while the stomach is empty.—*Berl. klin. Wochenschr.*, Jan. 28, 1878.

BLEPHAROSPASM ENDING IN RECOVERY.—At the meeting of the *Harveian Society* of London, on May 2d, Dr. Buzzard related a case of this rather rare affection, in a man aged fifty. It commenced by the eyelids closing spasmodically every few seconds. The patient was in excellent health in other respects. When talking or eating the spasm was worse. Pressure on the tragus of the ear checked the spasm. Some wax was found in the ear and removed, after which the constant current was applied. The spasm ceased during the time the current was applied, and the permanent condition was improved after each application. A blister was also applied behind the ear. The case got quite well.—*The British Med. Jour.*, May 18th.

THE MEDICAL RECORD:

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LEGAL REGULATIONS FOR THE PRACTICE OF MEDICINE.

IV.

We have seen that from 1806 to 1830 the practice of medicine was comparatively well regulated, for the unauthorized practice of physic and surgery was then a misdemeanor, punishable by fine or imprisonment, or both; and of course the culprits were not allowed to collect their charges. Some time before 1830, lobelia and other dangerous vegetable remedies were made the subject of extravagant eulogy by a notorious charlatan and his sectaries, and held up as panaceas, which were employed with blind rashness in almost all complaints. Lobelia is among the remedies which were employed by the aborigines of this country, and was long in the hands of empirics before it was introduced into regular practice by Dr. Cutler, of Massachusetts.

The legislature was petitioned to put some restraint on this practice, and the consequence was that in 1830 the Thompsonians succeeded in passing a section exempting all prescribers from penalties who merely used or applied for the use of sick persons any roots, herbs, or barks, however poisonous, the growth or produce of the United States. All other so-called doctors not authorized by law were fined twenty-five dollars, if convicted, for each act of physic or surgery.

This legalization of Thompsonian quackery was soon found to work so much injury, that in 1834 only those who used herbs, roots, or barks, without fee or reward, were exempt from fines.

Ten years after, the homœopathic delusion gained such headway among the demagogues of the State, that all persons were allowed to practise and collect fees, unless convicted of malpractice, gross ignorance, or immoral conduct, when they were subjected to a fine of not less than fifty, nor more than one thousand dollars, or imprisonment for not less than one month nor more than twelve months, or both, at the discretion of the court.

There was no longer any necessity for a license or diploma, and the Act failed completely to define what degree of ignorance constituted grossness. The law merely declared it a misdemeanor for any person, while in a state of intoxication, to administer any drug or poison by which the life of the patient was endangered; and if death ensued, the prescriber was liable for manslaughter in the third degree, *i. e.*, imprisonment for not less than two, nor more than four years.

Such were the consequences, which lasted for thirty years, or up to 1874, of fruitless and unwise attempts to repress Thompsonianism and homœopathy. In 1844, a Dr. Paine, who had been some time in practice in the county of Orange, had offered, by public advertisement, to heal his patients either on the allopathic or homœopathic system, as they should wish, and had actually practised on the latter system. Notice was served upon him, requiring him to apply for and receive, if worthy, a certificate of admission as a member of the Medical Society of the County of Orange.

The Society rejected him, and attempted to suspend him from the practice of medicine and disqualify him forever after.

Judge Cowan decided the case against Dr. Paine, when the homœopaths applied to the legislature, and, with the aid of the late Judge Scott, overthrew almost all the former laws about the proper practice of medicine; thus for thirty years entailing almost untold injury to the public at large, which became the prey of numberless quacks and scoundrels of all degrees, and also striking a heavy blow at medical science and professional standing everywhere.

If the Medical Society of the County of Orange had dealt wisely and quietly with its one homœopath—even met him in consultation in cases of need, he would doubtless have been obliged to resort to the skill and science of regular medicine so frequently that the infinitesimal system would never have made much headway, and would not have enlisted all demagogic lovers of so-called toleration and fair play on its side.

In 1846 and 1847 the American Medical Association and the New York Academy of Medicine committed the same great mistake, which they have persisted in up to the present time.

The questions naturally arise, if the medical societies had dealt in a more worldly wise and politic way with the Thompsonians and homœopaths, whether less evils would not have ensued. As it was, the State and county medical societies were greatly crippled by law, and unfortunately both they and the profession at large added greatly to the mischief. It is true they preserved their organizations after a feeble fashion, but seemed to forget that they still had ex-

tensive powers which might be wisely used. Many influential members neglected to join their county medical societies merely because the legal penalties for not so doing were removed. The law remained, and men of high public spirit should have obeyed it, penalty or no penalty. In fact, they should have redoubled their efforts to fill up their ranks and increase their influence.

It is true that the position was a rather peculiar and difficult one, viz., that of restraining the Brobdingnagian grossness of Thompsonianism on the one hand, and the Liliputian absurdities of homœopaths on the other. Numbers, science, and abstract reason, without the aid of broad common-sense and prudence, were and still seem destined to fail for a long time.

In 1846 and 1847 the American Medical Association and the New York Academy of Medicine perpetrated these errors of policy.

It is true that, in 1823, the medical societies of the State and counties of New York had declared that the medical profession should be exercised with fidelity to its scientific principles and approved doctrines, and that a departure from these constituted quackery. But in old times every homœopathic physician had been educated in the regular way, and almost all of them fell back, as they now do, upon approved methods in every great emergency, and some of them could have been led back into the regular ranks.

It is a wise saying that "all prejudices, however inveterate and apparently unreasonable, have, in some obscure way, an honest origin, and are most generally just inferences from narrow premises, which pride, passion, or interest prevent their adherents from at once acknowledging; and when ignorance comes in aid of any or all of these causes, it opens a wider scope to their influence."

All epidemics in the moral and scientific worlds must have a certain course or run, and require the wisest and most Christian or politic treatment. If prejudice is met with prejudice, passion with passion, pride with pride, and class interest by class interest, an endless war ensues, during which the public and the profession suffer.

It is not right to regard every one who differs from us in law, politics, religion, and medicine, as wholly a scoundrel. There were always in the homœopathic, and even in the eclectic ranks, men with a reasonable amount of knowledge of medicine, and of passable morality, who were honestly but blindly pursuing what they conceived to be new and useful light. The wonders of magnetism and electricity had excited a belief in the marvellous, and many have a pitiful but honest craving after miracles and marvels. Medicine was more imperfect forty years ago than now, and part of the usual practice with antimony, mercury, and bloodletting was as injudicious and perhaps as terrible, both in seeming and in results, as Thompsonianism. Expectancy was considered preferable to heroic treatment by some of the most astute physicians, and homœopathy seemed to some a medium between doing too much and nothing at all. It was a very seductive and delusive system to many poetic and imaginative souls, and it finally threw great light upon the natural history of disease, which no one but enthusiasts would have dared to seek.

The best educated, most honest, and practical of the homœopaths would, perhaps, long ago have been in the regular ranks, if treated wisely and tolerantly. In the first burst of their enthusiasm, they, like Dr. Paine, spoke disrespectfully of the medical profession, and published severe and even slanderous newspaper and other articles against it. The larger mass of medical men thought they could easily crush a small band of unreasonable and unreasoning enthusiasts. But as long as the regular profession could not cure all diseases certainly, quickly, and pleasantly, a large number of the laity sided with those who believed they could and promised they would; and others saw no great choice in being severely vomited by tartar emetic or lobelia.

It is also true that the regular profession of this city devoted itself most earnestly to the study and diagnosis of disease, and founded the Pathological Society in 1844, while the exclusives, viz., the eclectics and homœopaths turned their whole attention to deluding themselves and the public that they had made and were constantly making the most wonderful advances in the treatment of all diseases, especially incurable ones.

The studies of the regular profession seemed to carry it away from the sympathy of the public, while those of irregulars appealed directly to it. Of course, the one became unpopular, while the others grew in public admiration.

This continued until the great discoveries by aid of the microscope, ophthalmoscope, laryngoscope, stethoscope, etc., etc., carried the regular profession so far in advance that specialties in medicine had to be established, followed by specialties in therapeutics, leading to the grand discoveries of the bromides, chloral, carbolic acid, nitrite of amyl, salicylic acid, the hypodermic syringe, and hosts of remedies for formidable diseases, which paled all the petty appliances of the homœopaths and eclectics, and commenced to convince the public and most of the irregulars that the regular profession was more than their peer, both in the study and cure of disease. Finally, the imperfect law of 1874 became the entering wedge for restoring the regular profession to its lost rights and influence.

The majority of the homœopaths use the new discoveries of the regular school more than they do their old remedies; the so-called new school of homœopaths has become the old school of medicine, and the Thompsonians and eclectics were always in their

doses and remedies merely an ill-cultivated branch of regular medicine.

RURAL HYGIENE.

THE present season naturally suggests the feasibility of a temporary absence from the city and its possible advantages. Although the practice of ruralizing is becoming more and more extensive, the evils which have become associated with it have been proportionally magnified. In consequence of the demand for country board, a large number of farmers have thrown open their doors for customers, and vie with the country hotel-keepers in the general unsanitary condition of their premises. Even in the so-called model farmhouses, the first-class country hotels, and in the larger establishments of the more fashionable resorts, we often find the foul and reeking privy vaults in close proximity to a well; the rooms, if not small and close, at least unventilated; while the dietary is stamped with the most objectionable features of boarding-house management. Under the circumstances, except for the out-door life which the season invites, many of the guests would suffer from serious attacks of illness. The religious camp-grounds, in many instances, need much more sanitary supervision to make their continued occupation from year to year free from danger.

All these are certainly drawbacks; but there is no doubt that the benefits of ruralizing are sufficient to warrant every hard-worked, nervous, overstrained Metropolitan in being temporarily absent from his home—free for a time from business cares, and free to enjoy a change of scene and condition, which, at this season of the year particularly, he so much demands.

COUNTER-PRESCRIBING.

FROM all accounts it would appear that the practice of counter-prescribing by druggists is on the increase, especially in the southern and eastern part of the city. Would it not be well, in the coming fall, for a committee of the County Society to investigate the matter and suggest a remedy? If these counter-leeches still persist in defying ordinary decency, they may only hasten the time when physicians will keep their own medicines.

THE MEDICAL SOCIETIES.

THE different medical societies in the city, and, indeed, throughout the country, have suspended their meetings until the fall months. This circumstance will afford us an opportunity for inserting during the summer many very interesting and valuable reports, which, in consequence of the pressure upon our columns, has been deferred. Many original communications, review articles, and hospital reports have been in this category, and will appear as the opportunity presents itself.

Reviews and Notices of Books.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by DR. H. VON ZIEMSSEN. Vol. xiv. *Diseases of the Nervous System and Disturbances of Speech.* By Prof. A. EULENBURG, Prof. H. NOTHNAGEL, Prof. H. VON ZIEMSSEN, Prof. H. JOLLY, Prof. A. KUSSMAUL and Dr. J. BAUER. Translated by E. Buchanan Baxter, M.D., and Alexander Morison, M.B., Edin., of London; David F. Lincoln, M.D., George B. Shattuck, M.D., Samuel G. Webber, M.D., of Boston; and J. Haven Emerson, M.D., and John A. McCreery, M.D., of New York. ALBERT H. BUCK, M.D., Editor of American Edition. New York: Wm. Wood & Co., 1877.

THERE is probably no class of diseases which the general practitioner meets in his daily routine to which he brings less positive knowledge and less definite ideas, and the care of which he therefore undertakes with less comfort to himself and less good to his patient, than diseases of the nervous system.

In large cities a certain number of such cases may be turned over to the care of specialists, or their counsel may be invoked by the physician in charge. But throughout the vastly greater portion of the land even this aid is not available, and whatever is done for the victim of neuralgia, chorea, or epilepsy, for the paralytic or the aphasic, must be undertaken by the general practitioner. It is with pleasure, therefore, that we note the amount of space in this Cyclopædia devoted to Diseases of the Nervous System. It is one of the greatest merits of a work like this that it not merely contains valuable treatises on the diseases we are most familiar with, like pneumonia and dysentery, but that it supplies its thousands of readers with equally exhaustive and practical papers on subjects with which they are but little familiar, and which are very briefly and unsatisfactorily handled in our general works on practice.

The volume now before us begins with an article on Vaso-Motor and Trophic Neuroses, from the pen of the well-known Prof. A. Eulenburg, of Greifswald. A few pages are first devoted to the subject of *Hemicrania*, with regard to the etiology and pathology of which the author confesses his ignorance in a way that is truly refreshing. When speaking of treatment he scouts the guarana humbug, finds quinia and ergotine of use sometimes, nitrite of amyl temporarily valuable, but dangerous, and attaches the greatest importance, both in treating the paroxysm and the intervals, to the constant galvanic current, for the employment of which he gives special directions. Let the numerous victims of migraine in the medical profession try it on their own aching heads, and they ought soon to accumulate abundant evidence for or against the remedy.

Angina pectoris, which next claims attention, is discussed in an able and instructive manner, being divided into the following types: 1. Excito-motor cardiac or cardio-centric, ganglionic angina pectoris, from direct lesion of the automatic excito-motor ganglia of the heart. 2. Regulator angina pectoris, from lesion of the cardiac nerves of arrest. 3. Excito-motor sympathetic angina pectoris. 4. Vaso-motor angina pectoris. The symptoms of these various forms are given, and the treatment, though confessedly unsatisfactory, at least makes an attempt at being rational.

After a brief discussion of unilateral progressive atrophy of the face—one of the curiosities in medicine—thirty pages are devoted to *Basedow's disease*, also called exophthalmic goitre. We regard it as a mistake in the translator or editor not to give this name as a

synonym in the text, nor allude to it in the index, inasmuch as, right or wrong, it is the name by which the disease is best known in America. The constant employment of the word "struma" for "goitre" is open to the same objection.

Prof. Eulenburg differs from von Graefe in not regarding the loss of power to move the lid in harmony with the eyeball, in looking up or down, as *pathognomonic* of Basedow's disease. Nothing new or definite is given on the pathology of the affection, while in the way of treatment the greatest good is claimed from galvanization of the sympathetic. Among the trophic neuroses, progressive muscular atrophy, pseudo-hypertrophy of the muscles, and true muscular hypertrophy each claim a section. In speaking of progressive muscular atrophy the author cautions against the "do-nothing" treatment, and claims that early cases are improved or arrested by the use of electricity and "medical gymnastics."

In a later portion of the book, Eulenburg again appears with chapters on catalepsy, tremor, and paralysis agitans, and a few words on Hammond's disease or athetosis.

Prof. H. Nothnagel, of Jena, occupies but a comparatively small space in an excellent discussion of the questions of *epilepsy* and *eclampsia*. He disagrees with Russell Reynolds in his rejection of "reflex epilepsy." The question as to the causes of epilepsy is divided into:

"1. What influences produce the epileptic change? and,

"2. What produce the outbreak of the symptoms?"

It is taken for granted that the change is brought about gradually, that it may depend on "lesions of a definite anatomical kind," or on "factors not appreciable anatomically," and again later (p. 210) we are told that "*epilepsy may be developed altogether spontaneously, without any inducing influences whatever at present known.*" But if anatomical changes are to be found, we are not left in doubt as to where to look for them. "The pons and medulla oblongata are the seat of epilepsy; if any anatomical changes exist they are to be sought for in these parts" (p. 262). And yet the author admits that "probably no uniform, constantly recurring histological change generally forms the basis of epilepsy." The entire discussion on the pathology of the disease will bear study.

In the treatment of epilepsy, Nothnagel puts more confidence in bromide of potassium than anything else, though by no means lauding it as infallible. He begins treatment with 75 grains (5 grammes) a day, and increases it to 10 or 15 or even 20 grammes (150 to 300 grains).

The section on *Tetanus* is contributed by Dr. J. Bauer, of Munich. It is rather more surgical in its character than most of the articles in the Cyclopædia. The author does not believe in the inflammatory character of tetanus, nor does he altogether accept the theory of simple increased reflex irritability. Under the head of treatment he has a good deal to say about the treatment of the wound, and relies for the tranquillization of his patients upon chloral and bromide of potassium.

The subject of *Chorea* is handled by Dr. von Ziemssen himself in his usual interesting and instructive manner. The distinction is first clearly drawn between what should be included under this name and the so-called *Chorea magna sive Germanorum*, the dancing manias and simulated spasms formerly confounded therewith. Due credit is given to English observers as having furnished the most valuable contributions to the study of this subject. The cerebral nature of chorea is maintained, though it is not claimed that the brain is the exclusive seat of anatomical change. The prognosis is declared to be generally good. The pages on treatment give quite a long list of remedies bearing some reputation in this line, among which arsenic seems to be most favorably noticed, while strychnia and bromide of potassium are declared to be useless.

Prof. F. Jolly, of Strasbourg, furnishes a thorough little treatise, covering one hundred pages, on *Hysteria*. He carefully goes over the whole ground of the relations of this affection—which he designates as a general functional neurosis—to various physical and psychical conditions. While, so far as we have observed, nothing new is advanced, the reader is furnished with a summary of what is at present known on this interesting subject.

But probably that portion of this volume most worthy of notice is the one which we shall be obliged to dispose of hurriedly in the limited space still left us. We refer to the three hundred pages occupied by Prof. A. Kussmaul, of Strasbourg, in a discussion of the *Disturbances of Speech*, which he himself modestly characterizes as "An Attempt in the Pathology of Speech." Notwithstanding the many uncertainties and obscurities in which this subject is involved, no thinking man can begin the perusal of these pages without being lured on from chapter to chapter by the fascination which belongs to this border-land between the material and what we have been wont to regard as the immaterial. The mere mention of some of the sub-headings of chapters will be sufficient to indicate the general range of the discussion: "Speech as a Movement of Expression and an Acquired Reflex; The Principle of Sound-Metaphor; Sensory or Instinctive in Contrast to Intelligent Judgment; The Three Stages of Language; The Centre of Speech a Great Central Organic Mechanism; Speech and Consciousness; Sensory Channels of Language; The Localization of Speech; Aphasia; Word-Deafness; Word-Blindness; Syllable-Stumbling; Deaf-mutism, and the Education of Deaf-Mutes," etc., etc. Passing to and fro from the physical to the metaphysical, from physiology to psychology, Prof. Kussmaul interests his reader equally in the known and the unknown, and stimulates the keenest desire to penetrate still further into this mysterious realm of thought-mechanism and the philosophy of speech.

The subjects here discussed are too novel and unfamiliar to the general reader to be satisfactorily represented by a few quotations, or any attempt at a brief abstract of the same. We must, therefore, content ourselves with the above general reference to Prof. Kussmaul's admirable work, which, in our opinion, constitutes the great charm of this volume.

One thing which is quite noticeable in the later numbers of the Cyclopædia is the increasing number of references to the other volumes, thus giving a unity in diversity to the work as a whole, and showing the high esteem in which it is held by the best thinkers in Germany.

POPULATION OF FRANCE.—According to the "Journal Officiel," the number of births in France during the year 1876, was 966,682, and the number of deaths 834,074, the excess of births over deaths being consequently 132,608. Of the children born in wedlock, 459,920 were males, and 439,456 females; of the illegitimate children 34,398 were males, and 32,908 were females. The number of still-births was 44,680. The number of marriages in the same year was 201,366.

Reports of Societies.

THE NEW YORK NEUROLOGICAL SOCIETY.

Anniversary Meeting, May 6, 1878.

THE meeting was called to order by DR. E. C. SEGUIN, the retiring President, who gave a brief review of the work done by the Society during the year.

He then introduced DR. J. C. SHAW, of Brooklyn, the President-elect, who thanked the Society for the honor it had conferred upon him in making him its presiding officer. In lieu of an inaugural address, he presented a contribution to the discussion of the paper for the evening, which was then read by DR. E. C. SEGUIN, and entitled

A CONTRIBUTION TO THE PATHOLOGICAL ANATOMY OF SCLEROSIS OF THE POSTERIOR COLUMNS OF THE SPINAL CORD.

The essential symptoms in the case which was made the basis of the contribution were as follows:

A male patient, æt. 58 years, was first seen by Dr. Seguin, Dec. 7, 1876. At that time the following record was made: for four or five years he had had burning numbness in the feet and legs, and recently as high as the umbilicus. Within the last three months he had had the same sensation in the fingers of both hands. In the February following the same symptoms were present, with the addition of distinct constriction bands about the lower part of the abdomen.

Patient lost sight of.

He was seen again, October 14, 1877, when the leading symptoms were extreme anæmia and general debility. Diagnosis, agreed to by Dr. E. D. Hudson, Jr., pernicious anæmia. Numbness still present in legs and fingers. At that time, an attack of sharp pain, localized in the left heel, occurred, lasting several days. His daughter stated that he had similar pain in the left thigh, in the month of August. *Those were the only pains the patient had ever had. Repeated testing of co-ordination of hands and feet had failed to show any ataxia.* When first observed the patient could stand and walk with the eyes closed. At no time was there vesical paresis or spinal epilepsy, or atrophy of muscles, or anæsthesia. There were no symptoms in the head or the eyes. Death by asthenia.

Autopsy, thirty-six hours after death, showed, besides a number of non-nervous lesions, slight opacity of the central arachnoid, an enormous accumulation of calcareous plates in the spinal arachnoid, over the posterior part of the cord, low down. The cord low down. The cord appeared normal to the naked eye. After immersion in bichromate of potash solution, the spinal cord showed to the naked eye well-marked sclerosis of the posterior columns. It was most marked in the upper lumbar enlargement, and extending to the uppermost part of the cord. It involved nearly the entire posterior median columns and more or less of the adjacent white matter. There existed, however, a band of normal white matter between the posterior horns and the sclerosed portion; consequently the distribution of the sclerosis was not strictly that of ascending degeneration or of the sclerosis of the columns of Burdach present, according to Charcot, in the early stages of ataxia. It was a mixed type. The microscope showed the lesion to be sclerosis, and not secondary degeneration. The remainder of the cord was normal, with the exception of the part about the central canal, which showed a multiplication of nuclei, an enlargement of the peri-vascular spaces, and an obliteration of the central canal; probably peri-ependymal sclerosis.

THE PRESIDENT, Dr. Shaw, reported three cases in which there were almost no pains, yet well-marked ataxia was present in two cases at post-mortem, though sclerosis of the posterior columns existed. The third case was yet living. His patients were two males and one female, and aged respectively 48 (living), 36, and 62 years.

He was of the opinion that the electric-like pains were by no means uniformly present as an early symptom of locomotor ataxia.

DR. HAMMOND doubted whether Dr. Seguin's case should be called one of locomotor ataxia. He thought that examination of the specimens with the low power showed that it was one in which there was simply sclerosis of the columns of Goll, and was like Pierret's case.

DR. SEGUIN regarded it as a case in which the sclerosis involved more than the posterior median columns or the columns of Goll, and stated that examination with a higher magnifying power showed marked sclerosis in certain parts of the columns of Burdach. In that view he was sustained by Dr. Spitzka.

DR. SPITZKA suggested that the peripheral numbness was due to causes of which at present we had but little knowledge, and in that opinion Dr. Seguin coincided.

DR. HAMMOND referred to two cases which had lately come under his observation, in which the ataxic symptoms were well marked, yet in neither instance had the patients suffered from any pain whatever. He agreed with Dr. Shaw in the opinion that electric-like pains were not such early symptoms as had usually been supposed. He had come to regard inequality or marked contraction of the pupils as one of the earliest symptoms. In some cases the gastric symptoms were prominent very early, and might exist twelve or fourteen months before ataxia was developed.

DR. MCBRIDE referred to a case in which he had observed numbness of the fingers of both hands, violent pains of the sticking variety, inequality of the pupils, very slight anæsthesia, *absence* of the "knee phenomena," and yet there was no history of crises or ataxia. He further referred to observations made recently by Westphal, who maintained that the *absence* of the "knee phenomena" was a diagnostic point of great value. [The term knee phenomena relates to the following facts: "If the ligamentum patellæ be struck in a healthy man while the knee is flexed at a right angle, or nearly so, a sudden contraction of the extensor muscles on the front of the thigh may always be felt."]—*London Med. Record*, March 15, 1878.

The question of interest was whether the knee phenomena was not already present before the characteristic symptoms of posterior spinal sclerosis were developed; and also whether its absence might not, therefore, in some cases, afford material aid in forming an otherwise difficult or impossible diagnosis.

Discussion was continued at some length by Drs. Seguin, Shaw, McBride, Hammond, and Emerson.

The Society then adjourned.

NEW YORK ACADEMY OF MEDICINE.

SURGICAL SECTION.

Stated Meeting, May 14, 1878.

DR. STEPHEN SMITH, CHAIRMAN.

PLASTIC APPARATUS IN TREATMENT OF FRACTURES.

DR. S. B. ST. JOHN read a vigorous and exhaustive paper upon the above subject, in which he advocated the use of the plaster-of-Paris apparatus. The interest in the paper centred in the review and criticism offered upon the lecture given in Bellevue Hospital by Dr. Frank H. Hamilton upon the Treatment of Fractures of the Shaft of the Femur in the Adult, and published in THE MEDICAL RECORD for Dec. 1, 1877.

By the term "plastic" was meant any form of dressing, which, when first adjusted, was soft and yielding, and subsequently became firm and unyielding. Dr. St. John, however, confined his remarks to the plaster-of-Paris dressing, inasmuch as in the clinical lecture referred to it had been condemned without reservation.

VALUE OF STATISTICS.

The value of statistics was first considered, and it was believed to be a fair and legitimate inference that such as came from large and well-regulated hospitals could be relied upon as a basis for scientific deductions. The qualification of, the competition among, and the honest emulation which stimulated the internes was regarded as a guaranty of the excellence and reliability of the clinical facts which they recorded and the statistics which they collated.

DISLIKE FOR PLASTIC APPARATUS.

With reference to plastic dressings, they were disliked by three classes of surgeons:

1. Those who were fond of fussing and pottering, of tying and untying strings, of loosening and tightening straps, and of shifting pads and cushions.

2. Those who had invented splints to fulfil certain indications; and

3. Those who based their convictions, with reference to the value of any given plan of treatment, upon careful trial, accurately noted results, and a comparison of the results obtained with those derived by other methods in similar cases.

It was the latter class Dr. St. John hoped to reach.

INDICATION FOR THE USE OF SPLINTS.

The indication in the use of splints in the treatment of fractures was, to hold the fragments of bone in position, and to accomplish that most successfully they should be equably fitted to the shape and contour of the limb.

ADVANTAGES CLAIMED FOR THE PLASTIC APPARATUS.

The advantages claimed for the plastic apparatus were: 1. Little tendency to displacement of the splint; 2. Freedom to the patient to go about (in case of simple and uncomplicated fractures); 3. Less irritation, less pain, and less extravasation of blood; 4. Less liability to excoriation; and 5. Uniform compression.

In order to realize those advantages the gypsum splint must be *judiciously* applied. It was not difficult to apply a plaster-of-Paris splint so that it would present a very neat-looking appearance, but such a splint might be very far from a judicious dressing for the fracture. There were several conditions in which a limb might be placed that would decidedly contraindicate the use of any form of dressing which did not permit of its prompt inspection at any time. There were cases in which even the application of a simple roller bandage was contraindicated, and most certainly such cases were not proper for the application of gypsum or any form of plastic splints.

TEST OF VALUE FOR ANY APPARATUS IN THE TREATMENT OF FRACTURES.

It was believed that the test of value for any dressing applicable to the treatment of fractures, was its ability to prevent shortening or to reduce shortening, if it must occur, to the minimum degree.

QUOTATION FROM THE CLINICAL LECTURE.

Dr. St. John then quoted from the clinical lecture to the effect that Dr. Hamilton had stated that the introduction of the plaster-of-Paris dressing was several steps backwards; that he had seen more shortening and crooked limbs since its adoption than ever before; that it afforded no means whatever for maintaining extension and counter-extension; that he had seen two or three deaths occasioned by its use; that he was happy to say it was almost abolished, and was sure that it would not be employed more than once or twice in country practice (see MEDICAL RECORD, 1877, p. 754).

Certainly no condemnation could be more complete, and Dr. St. John maintained that if those opinions were not endorsed by Dr. Hamilton's professional brethren, he (Dr. H.) had done the medical profession a great wrong.

If those opinions were coupled with a preceding sentence in the same lecture—"The fracture is so oblique, that unless the fragments are maintained in position by extension and counter-extension, they always (a general law) overlap each other"—a most promising text was presented to lawyers, from which they could prove that some of the most eminent surgeons in the world were ignoramuses and unworthy to be trusted in the application of their art.

THE QUESTION FOR DISCUSSION.

The question for discussion was not whether the plaster splint was the best that could be employed, but whether it was, under any circumstances, a justifiable method of treatment.

TEST OF VALUE FOR ANY SURGICAL PROCEDURE.

The test of value for any surgical procedure was: 1. Theoretical; 2. The endorsement it received by representative men; and 3. Comparative results, as shown by careful and accurate statistics.

With reference to fracture of the femur, one of the main elements in deciding as to the value of any method of treatment was its ability to prevent shortening, and upon that point Dr. St. John made the unqualified assertion that the plaster-of-Paris dressing could prevent shortening. When the fragments had been placed in proper position, the plaster could be so applied as to prevent any tendency to shortening. It was a passive apparatus when the muscles did not try to produce shortening, and became resistant only when the muscles became active.

CONSIDERATION OF THEORETICAL OBJECTIONS.

The plaster-of-Paris splint had been objected to theoretically because when applied sufficiently tight to maintain extension, it became a source of constant irritation unless the greatest care and nicety was exercised in its application, and that such constant irritation was inevitably followed by damaging effects upon the perineal tissues. It had been maintained in the clinical lecture referred to, that if the plaster was put on so that extension was maintained, the pressure would cause ulceration, and the author of the lecture had referred to one case in which extensive ul-

ceration had occurred. [See MEDICAL RECORD for 1877, p. 754.]

CAN THE PLASTER APPARATUS BE APPLIED SO AS NOT TO PRODUCE IRRITATION AND YET BE EFFECTIVE?

Dr. St. John then asked the question, Was it possible to apply the plaster-of-Paris splint so nicely that it would not be a source of irritation and yet be an effective dressing? The answer was in the affirmative, and in its support reference was made to 107 cases of fracture of the thigh treated in Bellevue Hospital with less than one-half inch shortening. If the splint had been able to give such results in so large a number of cases, and at the same time was liable to produce constant irritation, hence ulceration, there should have been more than a single case in which ulceration occurred.

In explanation of the single case of ulceration, which had been referred to in the clinical lecture, Dr. St. John remarked that the patient was a drivelling idiot, and his mental condition was such as to prevent him from making any complaint with reference to the splint.

Dr. St. John made special reference to the case in which the splint was applied under the influence of chloroform, and cited in the clinical lecture as an example of extreme shortening under the plaster treatment. [See MEDICAL RECORD for 1877, p. 753.]

In that case the age of the patient (83) was such as to render a perfect result only a secondary consideration. He believed that such cases as the latter should not be shown to students as a conspicuous example of the inability of the gypsum splint to maintain extension, nor should the former case be presented as an illustration of the *accidents* specially liable to attend the use of the plaster-of-Paris apparatus.

Dr. St. John took issue with the view that the plaster splint, in order to be effectual, must make constant pressure upon the perineum. Practically it was not true that the splint made constant pressure upon that part. Theoretically, constant pressure was not necessary in order to keep the limb properly extended. In reality, pressure upon the perineum meant *intermittent muscular* action, and such intermittent pressure did not produce ulceration.

With reference to statistics, Dr. St. John protested against rejecting *all* statistics that were not tested by the collator or verified by his personal friends, for the value of statistics was directly related to the number of cases. For example, measurements might be made to the one-thirty-second of an inch in *five* cases, and be sworn to before a notary, and yet not be of much value; but measurements in *one hundred* cases, even with mistakes of one-fourth of an inch in a certain number, would go far towards establishing a principle. Unless, therefore, it could be shown that gross carelessness and dishonest statements had been incorporated, the measurements and statistics collated from a well-regulated hospital were valuable.

Reference was then made in detail to cases of fracture of the thigh that had been treated by the plaster apparatus in Bellevue, Roosevelt, St. Luke's, St. Francis', and other hospitals in this country and abroad, and he also referred to American, English, and German authorities in surgery, and reached the conclusion from the data thus obtained that the plaster-of-Paris apparatus was a valuable method of treatment, notwithstanding it had been so unreservedly condemned in the clinical lecture. He had gathered 150 cases from various sources, and the average shortening was less than one-half of an inch.

Of these there were from Bellevue Hospital 107 cases in which the average shortening was less than one-half inch; from Roosevelt Hospital thirteen cases with an average shortening of five-eighths of an inch; from St. Luke's Hospital three cases with an average shortening of five-eighths of an inch; from Chambers Street Hospital fifteen cases with an average shortening of one-fourth of an inch; and from other sources twelve cases with an average shortening of one-fourth of an inch. Total, 150 cases with an average shortening of less than one-half an inch.

ANALYSIS OF CASES IN WHICH UNFAVORABLE RESULTS WERE OBTAINED.

A small number (five) of cases, in which decidedly bad results followed the application of the apparatus, were analyzed to see whether the result depended upon the improper use of the splint, or the improper management of the apparatus, or upon the unsuitableness of the case for the application of such an apparatus. The conclusion reached was, that in all the cases one or other of those conditions was present, and that the bad result was not necessarily attributable to the use of the gypsum apparatus.

The *first* case was recorded as a failure to take warning, from the evidence of impeded circulation, and remove the splint; the *second* case was unfit for the application of the apparatus, because of rupture of the popliteal artery; the *third* and *fourth* cases were those in which there were abundant causes for death, outside of the symptom produced by the splint; and the *fifth* case was one of deformity requiring refracture, and due to "taking in slack" in the splint instead of removing it and applying a new one.

A number of cases which entered Bellevue Hospital and were treated with Buck's extension with unfortunate results, were also mentioned. Dr. St. John did not attempt to explain why such unfortunate results followed, as two inches, one and one-half inches, two inches, and one inch shortening had occurred, but simply cited them as cases which proved that any plan of treatment might fail under certain circumstances.

USE OF ANÆSTHETICS.

From an analysis of the cases Dr. St. John reached the conclusion that an anæsthetic was not necessary to the successful employment of the plastic apparatus.

DISCONTINUANCE OF THE USE OF THE PLASTER-OF-PARIS APPARATUS IN BELLEVUE HOSPITAL.

With reference to the discontinuance of the use of plaster-of-Paris in the treatment of fractures in Bellevue Hospital, it was remarked that the frequency of the use of any apparatus depended at first, in a great measure, upon its novelty. Subsequently, when the experimental novelty had worn away, the details necessary to its success might be sufficient to prevent its use.

Dr. St. John then passed to the consideration of the cases in which its use was justifiable, and also noticed some of the rules which should regulate its employment. It was a proper dressing in most cases of simple fractures, compound fractures, comminuted fractures, sprains, and also for fracture of the ribs, in which instance it resembled the application of the plaster-of-Paris jacket for spinal disease.

One important rule regulating its use was, that it should never be applied so long as there was any doubt with reference to the integrity of the deep arteries and veins.

It was recommended not to cut away the splint upon the inside of the thigh, in case the splint became loose, but to remove it and apply a new one. Again, it was important to wait until the maximum of swelling had been reached before the apparatus was applied.

In cases in which, after the application of the plaster dressing, there was the least evidence of sluggishness of the circulation, the splint should at once be cut down. In so doing it was not necessary to cut through either the pelvic band or the covering of the foot, hence the points from which extension and counter-extension were made were preserved intact.

In conclusion, Dr. St. John recommended the plaster-of-Paris splint as an efficient and reliable apparatus to be employed in the treatment of fractures, and one which, in the hands of experienced surgeons, was free from special danger. It therefore deserved a front rank in our list of apparatus, and, instead of abandoning it in disgrace, we should give it hearty welcome.

The paper being before the Section for discussion, DR. A. C. POST remarked that in the main he was disposed to agree with the author of the paper in the statements which he had made as to the value of the plaster-of-Paris dressing in the treatment of fractures. He was inclined, however, to impress a little more strongly upon those who were not fully conversant with its application, the dangers attending its use. It had been his misfortune to see several cases of extreme deformity, after fracture of the thigh and treatment with the plaster splint, applied by men inexperienced in its application.

Reference was made to one case in which fully *one inch* of shortening occurred in a simple fracture of the thigh of a boy nine years of age, and the limb was also very bowed. He had not seen, in simple fracture of the thigh, such bad results under the extension treatment in the hands of any surgeon who undertook the treatment of such a fracture.

Reference was also made to two or three cases which had found their way into the Presbyterian Hospital. The patients had been treated outside by surgeons who did not understand how to apply the plaster dressing, and the result had been either non-union, or union with great deformity; the degree of deformity exceeding what he had been accustomed to see under any other method of treatment. In his lectures to students he had, upon this subject, given the following advice: Never to undertake the treatment of fractures by means of the plaster dressing without making themselves thoroughly familiar with all the details necessary in order to secure its successful application. It would be much safer for those who had not acquired such experimental knowledge, to treat fractures by means of some apparatus which permitted the surgeon to see the limb from day to day, to make measurements, to guard against deformity, etc., which would result from the bad application of the plaster-of-Paris dressing. He had seen very excellent results obtained by treatment with the plaster dressing, and he had also seen equally good results produced by treatment with the extension apparatus—the weight and pulley.

DR. FRANK H. HAMILTON remarked that the paper to which the Section had listened was precisely such an one as he would have expected from Dr. St. John—namely, one of the most complete papers written upon the subject under consideration. It was as fair and impartial as the argument from an advocate of any particular measure of treatment could be. The position, however, which Dr. St. John had taken did not in all respects accord with Dr. Hamilton's experience and belief. Dr. St. John had rightly stated that the question was, which apparel made the best limbs with the least amount of shortening? To that Dr. Hamilton added, the period had passed when the reply of Johnson to Radley was referred to as a precedent.

Radley claimed that without any apparel whatever he had treated a certain number of cases of fracture of the thigh, and that *all were cured.*

Mr. Johnson said in reply: "That a cure took place we do not doubt, but the information we should most desire would be on the length of the cured limb and on a few other matters of that sort."

That period had passed, and yet not so long as might be supposed. It was not many years ago that the Philadelphia Hospital, the New York City Hospital, and the Boston Hospital published the recorded cases of fracture of the thigh simply as *cured*, and without reference to statements regarding the length of the limb. Only rarely was any statement made as to whether the cured limb was straight or bowed.

With the exception of the tables furnished by himself many years ago, it was only quite recently that we had been supplied with anything professing to be carefully prepared statistics upon this subject. The first series was furnished by Dr. H. B. Sands, the next by Dr. St. John, then followed Dr. Van Wagenen, and subsequently those of Dr. J. D. Bryant.

It was to be observed that all those gentlemen were, or had been, when their reports were made, connected with Bellevue Hospital. We yet remained without any statistics, giving measurements, from any other hospital in the United States, except perhaps from the New York City Hospital, from which Drs. Lente and Buck had made certain general statements as to results without giving tabulated reports. Dr. H. was not aware that anywhere abroad such statistics had been furnished, giving the length of the limbs, the mode of treatment, the form and seat of fracture, and the deviation from a straight line in the cases reported as cured.

It was to be specially noted, however, that when the records of Bellevue Hospital were carefully examined there was found a most astonishing deficiency with reference to *recording results.* In probably more than one-half of all the cases of fracture, there was no record whatever made of the results obtained. When the records were searched with reference to results following fracture of the femur, but little improvement upon the facts as they stood with reference to fractures in general, was found. That fact showed that the gentlemen who made the records had not taken any special interest in the termination of the cases, so far as the result with reference to shortening was concerned, and would also lead to the suspicion that when the record was made the opportunity was not embraced to note such details of results as were required at the present time.

We now had come down to the question of *lines*, and not of inches, when deciding with reference to the value of different methods of treatment. When, therefore, such nice questions were to be decided it required a great degree of industry and experience. Dr. Hamilton insisted upon the *experience*, and maintained that, notwithstanding the high qualifications which the young men who entered Bellevue Hospital possessed, they were deficient in just that practical experience necessary in order to make the accurate measurements necessary for valuable records of results in this class of cases.

Not one of the gentlemen who had given to the profession statistics from Bellevue, including Dr. St. John, had himself made the measurements reported.

Dr. Hamilton insisted that the rule laid down by Dr. St. John—namely, that statistics were liable to be vitiated by bad observations—if applied to the statistics furnished by Dr. Sands, Dr. St. John, Dr. Van Wagenen, and Dr. Bryant, would vitiate them all.

It would not answer to say there was no other testimony, and, therefore, we must accept these statistics as valuable; for they were not valuable.

The question was between *lines*, and not inches; and, therefore, he regarded all the statistics given as vitiated; and he made that statement without intending to imply any disrespect for the gentlemen by whom they were published.

Dr. Hamilton then made special reference to the statistics published by Dr. Van Wagenen as a "supplement" to Dr. Sayre's report to the American Medical Association in 1874 [See McClelland on Civil Malpractice]. There were thirty-two cases of fracture of the femur, and in only five out of that number did union take place *without shortening*. Such a result certainly was not very remarkable. Indeed, it was not so good as he himself (Dr. H.) had been able to obtain by another method of treatment.

Heretofore he had hesitated to separate his own cases from those belonging to other surgeons, but he would now do so, and show that the results reported by Dr. Van Wagenen were not so good as those obtained by himself. What he had been able to accomplish had already been published in part in the last edition of his Treatise upon Fractures (5th ed.). In that work he had reported twenty-four cases of fracture of the shaft of the femur, and in seven of those cases *perfect* recovery had taken place. The average shortening was less than one-half inch, and in not a single case did the shortening exceed three-fourths of an inch.

Dr. Hamilton stated that he had never had one and one-half inches of shortening in a case of fracture of the shaft of the femur which he himself had treated; while if reference was made to Dr. Van Wagenen's tables, it would be seen that in one case shortening occurred to the extent of 1⅛ inches, in one 1½ inches, in one 2 inches. Those cases were explained, in the report, by the fact that one patient had delirium tremens, one had pneumonia, and one had pleurisy. Dr. Hamilton thought that neither of those diseases, the delirium probably continuing only a few days at most, would have prevented better results had an attempt been made to obtain them by the use of Buck's extension apparatus; inasmuch as they simply prevented the patients from going about, a privilege regarded by some as essential to the success of the plan of treatment by means of plaster.

He then gave an analysis of his experience in the treatment of fractures of the shaft of the femur during the past year. The analysis related to forty cases of fractures of the femur treated in the fourth Surgical Division of Bellevue Hospital, which came more or less under his observation. Of those, only one was treated by plaster-of-Paris throughout. The number of cases of fracture of the shaft treated *exclusively* by Dr. H., not including fractures involving the knee-joint, or occurring at and about the neck of the femur, was *four*. Of those four, one was perfect, and a second was shortened only one-eighth of an inch. In computing the shortening, and in measuring limbs treated by other surgeons, Dr. H. had always been in the habit of admitting as perfect those which were shortened only one-eighth of an inch. According to that rule, therefore, there were two perfect cases out of the four. Including the cases previously reported by him in his book, fifth edition, he had treated seventeen cases of fracture of the shaft of the femur by Buck's extension apparatus, and out of those, seven had furnished perfect results: of those seven, only four were under eighteen years of age. In not a single case was the shortening over three-fourths of an inch; the average being almost exactly two-eighths of an inch or a fraction less.

Assuming, therefore, that the records from Bellevue Hospital as published by Dr. Van Wagenen were accepted, he had obtained *better* results than had been claimed for the plaster-of-Paris dressing, and every one of the limbs was straight. His standard accordingly was higher, and it was to make perfect limbs *always* if possible. With reference to the conditions of the limb, there was not a case of anchylosis or crooked limb in his own records, while in the statistics published by the gentlemen mentioned, a number of such cases appeared.

With such facts before him, how was the conclusion to be avoided that one was a better and the other a worse method of treating fracture of the femur, and that in the use of the plaster-of-Paris dressing we had made a step backwards. When he saw that a step backwards had been taken, he believed it to be his duty so to teach.

He had no predilection for any form of apparel. There was no form of apparel which he used when he first commenced practice that he still continued to employ without more or less modification. In the great majority of fractures occurring below the knee, he employed, by preference, the plaster-of-Paris dressing. Once he thought differently upon that point, but he had changed his opinion in that respect, and he might come to prefer the plaster treatment for fractures of the thigh, but such was not his expectation. He had used plaster-of-Paris dressing for fractured thigh, and should probably continue to employ it, but should very seldom, if ever, use it as a primary apparatus.

Other things being equal, that method of treatment was the best which was the least dangerous, and could be most safely applied by the inexperienced surgeon. What then was, by this rule, the best method? If the plaster-of Paris dressing required extraordinary care in its adjustment in order to prevent accidents, surely it could not be regarded as the best.

For the country practitioner who could not see his patient daily, most certainly it was not safe, and, therefore, was not the best method.

THEORETICAL OBJECTIONS CONSIDERED.

With reference to the theoretical objections to the plaster splint, especially as bearing upon the question of extension and counter-extension, he had not found such extension and counter-extension maintained *effectively* in any case which he had seen. The splints had always seemed to him to be loose within three or four days after their application; at least, he had been able to push his hand down between the splint and the thigh. Gentlemen said that the splints should not be so loose; but they were, nevertheless. Dr. Hamilton did not believe that any apparel, which was thus loose, could maintain extension and counter-extension. It was a plain question of mechanics, and it seemed to him that it was easy to be comprehended that a loosely-fitting dressing could not prevent the tendency to shortening. Dr. Hamilton did not agree with Dr. St. John in the statement that the tuberosity of the ischium was able to bear the pressure of the plaster splint, and thus give counter extension. It was not able to accomplish any more than did the old *perineal band*, and the old perineal band never overcame the tendency to shortening; for the reason that the perineum could not bear its pressure.

Practically, the perineal band had been abandoned, because of the liability to produce ulceration. If pressure could not be borne on the perineum, it must be made upon the sides of the thigh; and if the dressing loosened from the sides of the thigh, its point of support was removed, and it could not but fail to maintain any counter-extension.

But the recommendation had been made to cut the

splint open. When, however, that was done, all extension was lost, if any existed, and the surgeon must again *commence* his treatment.

Theoretically, therefore, Dr. Hamilton regarded the doctrine that the plaster-of-Paris splint could maintain extension and counter-extension, such as should be made in the treatment of fracture of the thigh, as unsound.

With reference to accidents, he had never known or heard of a case in which gangrene had followed the use of Buck's extension apparatus, as had happened frequently after the use of the plaster-of-Paris dressing.

Dr. Hamilton subsequently presented a photograph of a patient who had sustained an extra-capsular fracture of the *left thigh*, which was treated by plaster-of-Paris, at Bellevue Hospital, five or six years ago; and who, having fallen, received an extra-capsular fracture of the *right femur* a few months ago, and was treated at Bellevue Hospital by Buck's extension apparatus. In that case the result was as follows: the *left* leg, treated by plaster-of-Paris, was one-half inch shorter than the *right* leg, which was treated by Buck's extension, and the left had opposite the trochanter major an ugly projection. Dr. H. regarded that as a test case of the relative value of the two methods of treatment. In conclusion, he read the following summary of the forty cases of fracture of the thigh treated at Bellevue Hospital, from January 1, 1877, to January 1, 1878.

Of the forty cases *one* was treated by the plaster-of-Paris dressing *alone*, from the beginning to the close of the treatment.

In thirty-two cases the treatment was *exclusively* by Buck's extension, or by some modification of that apparatus. In one case, treatment was conducted upon a double-inclined plane, the patient having a bent and anchylosed knee. In three cases plaster-of-Paris was used from two to seven days, and then removed on account of its inadequacy, or of the pain which it caused, and Buck's extension substituted. In the cases of two children, aged respectively 4 and 7 years, the first had been treated outside with plaster two weeks, and the limb was very crooked; extension was substituted, and the result was a perfect limb. In the second case, plaster was used from the 10th to the 19th day; from that time, the splint having given way, it was treated by plaster reinforced with a long splint.

Dr. Lewis A. Sayre remarked that he was happy to find himself sustained by Dr. Hamilton in the views which he had always entertained with reference to the occurrence of shortening after fracture. He (Dr. S.) had held for many years that the point aimed at in the treatment of fracture of the femur, or any other bone, should be a *perfect* cure, or, in other words, union *without* shortening. In accordance with that principle he had claimed that proper treatment consisted in making only such extension and counter-extension as was necessary to produce an accurate adjustment of the fragments, and then apply something to *retain* them in that position. He did not hold to any special plan of treatment, but adopted that which he thought would best fulfil the indication and carry into effect the general principle for which he contended.

He was glad to hear Dr. Hamilton bring the standard of success, in the treatment of fractures, within *lines*, as we should probably, sooner or later, come to the agreement that a fractured bone could unite *without shortening*, if all the necessary conditions could be maintained. Whether all the necessary conditions could be maintained, Dr. Sayre was not able to determine, but he contended that, within reasonable limits, they could be secured. Dr. Sayre thought that opening the plaster-of-Paris splint did not remove the extension and counter-extension. On the contrary, the extension and counter-extension was made before the application of the plaster splint, which simply *retained* what had been *obtained* by the extending and counter-extending forces.

As good a result as he had ever seen was obtained in a case which was treated without any apparatus whatever. The patient was placed in a chair so that his body and limbs were substantially in the position which would be given by using the *triple*-inclined plane. The man was run over by one of the teams belonging to a large manufacturing firm in this city, and when he recovered he brought suit against the company for damages. The jury failed to find a verdict for the plaintiff, because his injured leg was as long as the other, and in every respect seemed equally as good. Inasmuch as we had lately come to learn that measurements before fracture was necessary, in order to determine whether shortening was present or not after the fracture had united, all of the statistics heretofore given might prove to be of but little value.

Dr. Allin thought that the point had not yet been reached at which we were qualified to compare one method of treatment with the other. As a rule, he favored Buck's extension. Still, he had seen admirable results follow the use of the plaster-of-Paris dressing. If the patient was a person who required exercise, and was not able to endure the confinement incident to treatment by means of Buck's extension apparatus, it was, perhaps, well to take the chances of getting slightly less favorable results and adopt th plaster treatment.

Dr. J. D. Bryant remarked that he was a firm believer in plaster-of-Paris dressing He thought that, if cases were gathered promiscuously, the results after treatment by means of Buck's extension apparatus would not be found to be so favorable as after treatment by means of the gypsum splint.

Dr. St. John remarked, by way of re-statement, that only 107 of the 150 cases he had reported were treated in Bellevue Hospital.

Dr. W. T. Bull, who had furnished Dr. St. John with a portion of the cases referred to as coming from outside Bellevue Hospital (Chambers St. Hospital), remarked that he had been fairly satisfied with the results obtained by the use of the plaster-of-Paris dressing. He well recollected when an interne at Bellevue Hospital that the results obtained in treatment of fractures of the thigh by means of Buck's extension were not so favorable as those obtained by means of the plaster-of-Paris splint, and he was somewhat surprised to hear the results which Dr. Hamilton had given.

With reference to loosening of the plaster splint, he believed that, when the swelling had been allowed to reach its maximum, the shrinkage, after the adjustment of the splint, would not be so great as had been represented.

Dr. St. John, in closing, said that Dr. Hamilton seemed to lose sight entirely of the object of the argument of the paper, which had been distinctly stated to be to claim a legitimate place for the treatment by the gypsum apparatus, and not to establish a comparison between this method and any other. He asked if Dr. H. still adhered to his assertion "that with this apparatus the limbs shortened as much as it was possible for it to shorten." (Dr. H. said that when he made that assertion he meant what he said, but he now desired to recall it.)

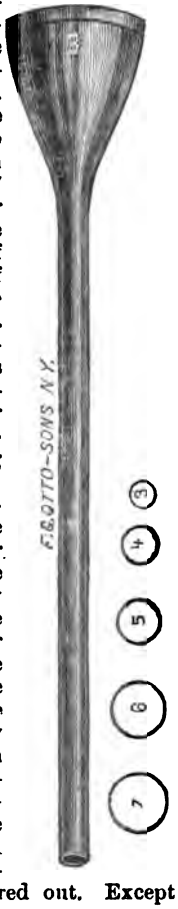
The cases adduced by Dr. H., treated by extension, showed remarkable results, but it was utterly unfair

to ask that these cases treated under the personal supervision of Dr. H. should be compared with cases taken at random from general hospital statistics, for cases of extensive treatment taken in the latter way showed no such results as Dr. H. had brought forward. There was fortunately a set of cases in the statistics brought forward to-night which were treated under the personal supervision of one man, Dr. W. T. Bull, of Chambers Street Hospital, and these fifteen cases, which were all of the shaft of the femur, would bear comparison with the seventeen cases of fracture of the shaft adduced by Dr. H., the average shortening being the same, the maximum less, and there being no deformity. As for the extreme accuracy in measurements, brought forward by Dr. H. as showing the perfection aimed at in treating such cases, it was self-evident that the facts recently brought to light by Dr. Wight, of Brooklyn, and endorsed by Dr. H., as to a normal difference in the length of the two legs, rendered nugatory any such attempt at exactness, and overthrew all arguments for the superiority of any particular method which rested upon measurements to within the minute fraction of an inch.

New Instruments.

ZAUFAL'S TRICHTER OR SPECULA.

Prof. Zaufal, of Prague, has called the attention of the profession to Trichter or specula for the examination and treatment of the naso-pharyngeal space, of which the accompanying cut is intended to show the general shape and length (11 centimetres) and the size of the smallest. There are five different sizes. The circles in the cut are intended to represent the smaller ends, which should be respectively 3, 4, 5, 6 and 7 millimetres in diameter; the Trichter have these numbers. They are made of Britannia-metal (neu-silber) or of hard rubber. It is an advantage of the former that they can be made rather thinner than the others; a further advantage is that, being polished internally, the illumination is much better. An advantage possessed by those made of hard rubber is, that acids or caustics can be introduced through them without injuring them.



In order to examine the naso-pharyngeal space a Trichter of suitable size is passed through the inferior (or middle) meatus of the nose, the greatest possible care being taken by the operator to avoid injury of the Schneiderian membrane. In order to succeed in this, the most delicate manipulation is requisite. When the Eustachian catheter can be used, one of these Trichter can almost certainly be introduced. When in position the posterior wall of the naso-pharyngeal space, the mouth of the Eustachian tube, and the upper surface of the soft palate can be seen, local applications can be made under direct vision, and polypi may be snared out. Except for their greater circumference and length, and the greater sensitiveness of the tissues of the nose, they present no practical difficulties that do not also apply to the use of the Eustachian catheter and the ordinary aural speculum. The parts are seen *erect* and not *inverted*, as when seen by means of the rhinoscopic mirror, which is an immense advantage as regards treatment. A good reflector, such as is used for the ear or larynx, gives from an Argand gas-burner or student's lamp a sufficient illumination. 3, 4 and 5 are the sizes most frequently required.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 7 to July 13, 1878.

Smith, A. K., Major and Surgeon. To report to Superintendent G. R. S. for duty at the General Recruiting Depot, David's Island, N. Y. H. S. O. 143, A. G. O., July 3, 1878.

Middleton, P., Capt. and Asst. Surgeon. Assigned to duty as Post Surgeon at Fort Porter, N. Y. S. O. 120, Dept. of the East, July 13, 1878.

Pope, B. F., Capt. and Asst. Surgeon. Assigned to duty as Post Surgeon at Fort Schuyler, N. Y. H. S. O. 116, Dept. of the East, July 8, 1878.

Kimball, J. P., Capt. and Asst. Surgeon. Assigned to duty as Attending Surgeon, Governor's Island, N. Y. H. S. O. 143, C. S., A. G. O.

Patzki, J. H., Capt. and Asst. Surgeon. Assigned to duty as Post Surgeon at Fort Ontario, N. Y. S. O. 120, C. S., Dept. of the East.

La Garde, L. A., 1st Lieut. and Asst. Surgeon. Assigned to duty at Fort Hamilton, N. Y. H. S. O. 116, C. S., Dept. of the East.

Medical Items and News.

Contagious Diseases — Weekly Statement.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 13, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.
July 6, 1878....	0	5	56	2	28	24	0
July 13, 1878....	0	8	44	4	20	31	0

Professor Van Buren's Article on Extirpation of the Rectum.—In our last issue a singular blunder occurred through an oversight at the printing office. At the conclusion of Dr. Van Buren's article on "Extirpation of the Rectum" was appended a portion of the discussion on plaster-of-Paris splints, following Dr. St. John's paper. Of course, our readers could recognize in so palpable an error one of those occasional and annoying accidents that sometimes occur under the most careful editorial management. Professor Van Buren's article should terminate within two lines of the bottom of the first column, page 24.

FIBROID TUMORS OF THE UTERUS TREATED BY SCLEROTIC ACID.—Dr. John Williams reports two cases of uterine fibroid treated by sclerotic acid. This acid dissolves readily in water, and in so far differs from ergotine. One of the cases was that of a woman aged thirty-four, who had suffered from severe flooding for some time. A fibroid tumor was detected, and half-grain doses of the acid were injected under the skin of the abdomen twice a week. The flooding was much reduced, but returned during a temporary discontinuance of the treatment. When the injections were again commenced, the flooding was checked as before. The tumor was reduced in size. Like results were attained in a similar case, including a decrease in the size of the tumor. The injection caused a little pain at the time, but that was all. It was followed in about half an hour by uterine contractions.—*The British Med. Jour.*, May 18th.

GREEN TEA AS AN ANTIDOTE FOR OPIUM.—Prof. Sewell, of Quebec, reports (*British Medical Journal*) the case of a lady, who had taken for the relief of pain three drachms of Battley's liquor opii sedativus every three hours till sleep was produced—altogether she had taken about three ounces and a half of the solution. When seen by Dr. Sewell, at 11 P.M., she was totally unconscious, with pin hole pupils, an imperceptible pulse, and, what seems almost incredible, only three respirations in two minutes. A strong infusion of green tea was prepared without delay, and half a pint of it was injected into the rectum, where it was retained for half an hour. This was repeated at intervals till 4 A.M., when the patient had so far recovered as to be able to speak, and at 8 A.M. she was pronounced out of danger. Even then, however, her sight had not recovered; she asked the attendant to light the gas, although the sun was shining brightly into the room.

HYPODERMIC INJECTION OF DIALYZED IRON.—Dr. W. H. Johnston, of Selma, Ala., writes: "I find a communication from Dr. W. M. Kemp, in a recent number of THE RECORD (June 15th), in regard to the *hypodermic use of dialyzed iron*. I was also induced to make a trial of it by reading an account of the flattering results derived from its use by Prof. Da Costa. I first injected ten minims, which produced agonizing pain immediately, and in a few minutes my patient expectorated a teaspoonful or more of bright blood from the lungs. It was two weeks before she recovered the use of the arm, but had no abscess. She insisted upon a second trial, and I consented, thinking my former preparation was bad. I then used equal parts of the iron and water, injecting fifteen minims of the two. This gave great pain, and was followed by an abscess, which, when opened, discharged about a teaspoonful of fluid, very black and offensive. Her arm was so painful for two weeks that she could not bear it to be touched. I have used hypodermically brandy, chloroform, quinine, strychnine, ergot, and a good many other medicines, but do not think I could be induced to try dialyzed iron again."

The Illinois Medical Recorder is a monthly journal of 28 pages, edited by R. E. Beach, M.D., of Vandalia, Ill. It is to be devoted to the interests of the local societies of that State. We wish it the success it deserves. Dr. Beach does not wish it to be understood that the journal is intended to supply "a want long felt," unless the same becomes apparent in the future. At all events, he is earnest in his determination to make a creditable periodical.

NEW ASSISTANT SURGEONS U. S. ARMY.—The following gentlemen have passed the examinations of the Army Medical Board in this city, and compose the first class, and are recorded in the order of their merit, with the college from which they graduated: Dr. Victor Biart, Belgium, St. Louis Medical College; W. W. Gray, Texas, Bellevue Hospital Medical College, N. Y.; Louis Brechemin, Penn., University of Penn. (Med. Dept.); Louis A. La Garde, Louisiana, Bellevue Hospital Medical College, N. Y.

AMERICAN ACADEMY OF MEDICINE.—The next meeting of the American Academy of Medicine will be held at Easton, Pa., on the third Tuesday of September, 1878, at 3 P.M.

DR. R. M. WYCKOFF, of Brooklyn, N. Y., has been appointed Registrar of Vital Statistics for that city.

AN EXTEMPORIZED FORCEPS.—Dr. J. T. Crow, of Carrollton, Ill., has extemporized a very simple forceps which may be made useful for many purposes. It is constructed of two pieces of wire of variable thickness, according to size and strength of instrument. Each piece of wire is made into a loop. The latter forms the blades, while the ends form the handles. The blades are curved like the ordinary short midwifery forceps. Instead of a hinge, there is a curvature of each handle, which, when the blades are slid or looped into each other, forms a place for the insertion of a cork or the finger as a fulcrum. By this simple arrangement, Dr. Crow claims that the forceps in different sizes can be adapted to an almost endless variety of uses.

DR. BURKE'S CASE OF TRAUMATIC TETANUS.—In line 19 of Case II., instead of "giving him ʒ iij. doses every half-hour," it should read, "gtt. i. doses every half-hour." Again, the strength of the alcoholic solution of the solid extract of the "bean" should be eight grains to the drachm.

TREATMENT OF HYDROPHOBIA.—Mr. O'Hara Brady reports, in a letter to the *Lancet*, a case of hydrophobia that got well under rather unusual treatment. It consisted, on the night the patient was first seen, in the application of a strong preparation of cantharides to the spine from the nape of the neck down, and in a vapor bath, which produced very free action from the skin, previously hard and dry. After this the patient became quieter and more disposed to sleep, the muscles of the neck became less rigid, and he could swallow a little. On the following day, Mr. Brady prescribed the bichloride of mercury every three or four hours, his object being to bring the system under its influence as quickly as possible. The paroxysms continued for some days, but gradually became less violent, and ceased entirely when the salivary glands were affected. The patient is now tolerably well. Mr. Brady believes that the sedative or narcotic treatment, usually employed in hydrophobia, tends rather to fix the disease than to eliminate the poison. Another cure for rabies, which is stated to have often been successfully employed by the Catholic missionaries in China, is the datura stramonium administered in decoction. The stramonium is said to produce "a new rabies, which cures the other, as cow-pox destroys the virus of small-pox." The Chinese antidote for stramonium is the decoction of licorice-root. Another, and still more efficacious Chinese remedy for hydrophobia, is the Hoang-nân, a plant like the ivy. It is said to have cured leprosy, snake-bites, etc.

Original Communications.

PRACTICAL REMARKS ON THE REMOVAL OF POLYPOID GROWTHS FROM THE EAR.

By ALBERT H. BUCK, M.D.,

INSTRUCTOR IN OTOLOGY IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK; ONE OF THE AURAL SURGEONS OF THE NEW YORK EYE AND EAR INFIRMARY.

It is my purpose in the present brief paper to discuss simply those points which are of practical interest in connection with the removal of polypoid masses from the ear. As the successful removal of such growths from the middle or outer ear is often the means of arresting permanently an otorrhœa that has for years been a source of great annoyance to the patient, and as such cases of chronic otorrhœa are very numerous, it becomes at once a matter of great importance that a procedure which may be productive of so much good should be as widely and thoroughly understood as possible. I am well aware that treatises on diseases of the ear discuss this subject very fully; at the same time I believe that much yet remains to be said in regard to many matters of detail, which are of the greatest importance in securing satisfactory results from operative interference.

In the first place, *it may be laid down as a rule that chronic otorrhœa owes its existence to the presence of granulation tissue* (or polypi) *in the middle or outer ear, or to a circumscribed caries of some portion of the temporal bone.* Phthisical or tubercular patients sometimes (apparently) furnish an exception to this rule, but in otherwise healthy individuals it is exceedingly rare not to find one or both of the conditions mentioned above underlying the protracted discharge from the ear.

The first practical question, then, in connection with this class of cases, relates to the best means of thoroughly exploring the ear in all its parts. The physician, we shall assume, is conversant with the use of the concave forehead mirror,* and is able to illuminate the walls of the external auditory canal and the outer surface of the drum membrane. He finds the external auditory canal filled with pus, and is therefore obliged to remove it before he can ascertain the condition of the deeper parts. Whether he employs the syringe or not for this purpose, he must in either case resort to the use of the cotton-holder (or probe) armed with cotton wool, before he can see accurately all that is to be seen. Indeed, the ability to thoroughly cleanse an ear, to lay bare every nook and cranny of this deeply-situated organ, is the key—if any *one* thing is—to an accurate knowledge of the pathological condition upon which the chronic discharge from the ear depends, and consequently to the successful treatment of such cases.

If the external auditory canal is filled with a very foul pus, it is generally pleasanter for the physician to remove as much of it as he can by syringing. If the discharge, however, is not specially offensive, it saves time to begin at once with the cotton-wool.* The so-called "cotton-holder" is simply a slender malleable steel probe, six inches long, and roughened on its sides for a distance of about half an inch from the end which is to receive the cotton. To this roughened end the cotton is applied by a twirling motion of the fingers. By varying the amount of cotton used and the mode of applying it, the physician can make a mop suitable either for the removal of large quantities of pus or mucus in the broad external auditory canal, or for the thorough cleansing of a small sinus leading through Shrapnell's membrane into the recesses of the middle ear. Those physicians who have hitherto trusted solely to the syringe for removing the obstacles which prevented them from seeing the deeper parts of the ear, will find that by aid of the cotton-holder they will be able to obtain a very much clearer insight into the extent and nature of the disease than ever before. But oftentimes, even after the most thorough cleansing with the syringe and the cotton-holder, masses of cheesy pus or of epithelium will be found lying upon the deeper parts and concealing them from view. While they might probably be brushed away by a somewhat forcible movement of the cotton-holder, it is not desirable to wipe off these parts in any but the most delicate manner. It is necessary, therefore, to resort to other means for the removal of such masses. A slender probe, made of pure silver, and shaped like the one represented in the accompanying figure, will be found of very great value for just this very purpose. The so-called "curettes" (see accompanying cuts) may also sometimes be used to great advantage in these cases. With these instruments scab-formations, masses of epithelium or of cheesy material, etc., can be dislodged or loosened

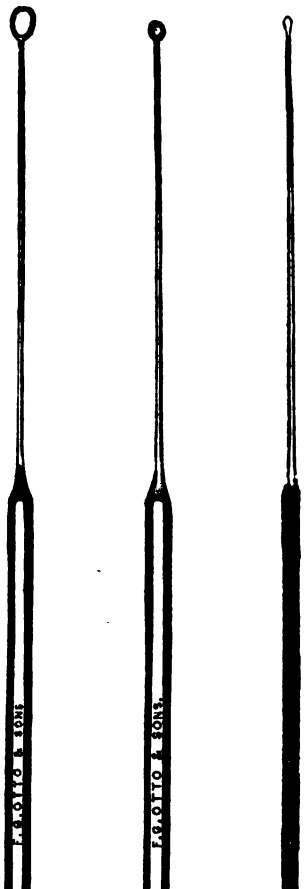


FIG. 1.—Malleable steel "curettes" and silver ear probe. Full size.

* The ordinary forehead mirror, such as is represented in nearly all of the treatises on the ear, and such as nearly all the instrument-makers offer for sale, is of little or no use in examining the ear. The mirror is generally so large as to be clumsy and difficult to manage, and it does not, by reason of its larger size, furnish a better illumination than one of medium size. In the next place, the reflector is placed so near the forehead-plate that no room is left for the physician, who should use both eyes, to see between the two. Finally, the ball and socket joint is usually so constructed that the plane of the reflector cannot form with the forehead-plate an angle of less than 150 or 140 degrees. A forehead reflector, to be of practical use for otological purposes, should not be over three inches in diameter, and should be connected with the forehead-band or plate by a ball and socket joint situated not less than an inch and an eighth from the lower edge of the forehead-plate, and so constructed as to rotate freely from side to side and from before backwards, allowing the plane of the mirror to form with the forehead-plate an angle of 120 degrees. With such a mirror the physician may perfectly well use for illuminating purposes a gas or lamp flame situated at almost any elevation above the level of the patient's head; and besides, both his hands are left disengaged—a matter of no little importance, since the services of an assistant cannot always be secured.

* The "absorbent cotton" is the best for this purpose.

from their attachments with little or no discomfort to the patient. Once detached from the underlying living tissues, these masses can readily be brushed out of the canal by means of the cotton-holder. In many cases, however, it will be found easier to lift out these masses by means of a suitable forceps with blades which form an angle of about 135° with the part held by the fingers. Here, again, it is necessary to call attention to the importance of using an instrument *with very slender blades* (length=2½ inches) *and a feeble spring.* Forceps cannot be used in the ear with delicacy and precision unless these two requirements have been fully met in their construction.

The external auditory canal once carefully cleansed, and the deeper parts exposed to view—so far at least as the removal of all extraneous matters can render them visible—our next step is to ascertain the exact limits of the region which is furnishing the constant outflow of pus. As already stated at the beginning of this article, *in the great majority of cases of long-standing otorrhœa the discharge is kept up either by a carious process in some portion of the temporal bone or by a mass of granulation tissue situated in one of the following three places: the external auditory canal, the middle ear proper, or the mastoid antrum.* If the physician, therefore, expects to relieve his patient of his otorrhœa, it is essential that he should ascertain, as accurately as possible, *where* the caries or the granulation tissue is located. It is not sufficient for him to ascertain in a general way that it is situated in the external auditory canal or in some part of the middle ear; he must ascertain the precise limits of the disease, just as the general surgeon does in caries of the tibia or in uterine polypoid growths. He must introduce his slender probe into every recess; he must touch with it every suspicious spot of redness; in a word, he must render to himself strict account of every portion of the ear within his reach. If the external canal is free from granulation tissue or from caries, and the pus clearly escapes from the middle ear through a perforation in the membrana tympani, he must pass his cotton-holder (armed with absorbent cotton) through the perforation and soak up the pus or mucus that fills the middle ear and prevents him from seeing the opposite promontory. In this way one can often bring to light a polypoid growth which otherwise would escape observation. But in many cases such a cleansing of the middle ear is not sufficient. The polypus may be so situated that no portion of it can be seen through the perforation. For instance, it may spring from the upper or outer wall, and may hang down on one side or the other of the opening. In addition, therefore, to the cleansing, it is advisable to bend the end of the probe slightly, and then, passing it in through the perforation, to rotate it in such a manner that it will be likely to bring into the field of vision any polypoid growth that may be located in the immediate vicinity. If these manipulations are executed with delicacy—the surgeon's eye being directed all the time upon the perforation, and account being taken of the exact situation of the (concealed) end of the probe—the patient will probably not complain of even a sense of discomfort, much less of pain. It is hardly necessary to add that the physician who does not possess delicacy of touch and the necessary skill in keeping any given portion of the ear steadily illuminated for a reasonable length of time, has no right to use either a probe or a forceps in the deeper portions of the ear.

This brings us finally to the question, What is the best method of removing polypi from the ear? If we bear in mind the fact that almost all aural polypi, no matter how large they may be, grow from a very small and rather tender peduncle, we can readily appreciate how safe a proceeding it is to pull them out "by the roots." Further on we will call attention to the only exception which it seems necessary to make to this rule. Very few surgeons at the present day advocate the removal of aural polypi (*i.e.*, growths of an appreciable size) by any other than mechanical means. The slow, unsatisfactory, and sometimes painful plan of destroying them by caustics or astringents has been very generally abandoned. If a large polypus fills the external auditory canal and presents itself within easy reach at the outer orifice, an ordinary dressing forceps, or better yet, Hinton's polypus forceps, will serve the desired purpose as well as any other instrument with which I am acquainted.

The mass is firmly grasped between the blades of the forceps, and is then separated from its deeper attachments by a combined rotary and pulling motion, or simply by direct traction. If the polypus, however, is situated more deeply in the canal, and reflected light is required to render the mass visible, such an instrument as Hinton's forceps—unless the canal happens to be unusually large—will be found awkward to manage, and productive of pain to the patient. Blake's snare * is the proper instrument to use under these circumstances. By aid of the slender silver probe the

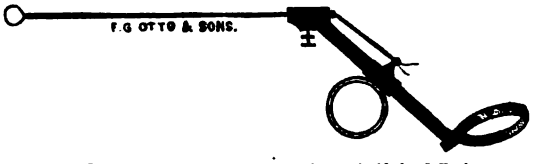


FIG. 2.—Blake's Polypus Snare. About half the full size.

physician can ascertain whether the mass grows from the cutaneous walls of the canal or from the middle ear or mastoid cells. Where the growth is of such size as to fill the canal, it is not necessary that he should satisfy himself of the exact situation of the base of the polypus before applying the loop of wire. It is sufficient for him to ascertain by actual probing that he can pass his snare over the mass to a given depth (distance from the orifice of the meatus) without encountering any obstacle. The loop is then

* This instrument, which was introduced by Dr. Clarence Blake, of Boston, in 1869 or 1870, is sometimes spoken of as "Blake's modification of Wilde's snare." Those, however, who have compared the two instruments, and know from practical experience how different they are from each other, will agree with me that the more recent instrument is justly entitled to the name of "Blake's snare." In 1872 or 1873 the instrument was still further improved by the substitution of a simple canula of soft (pure) silver for the double-mouthed steel or German-silver tube usually sold with the instrument. The pure silver canula measures three inches (8 ctm.) in length and but one millimetre in diameter (externally) throughout its entire length (except where it fits into the handle), while the steel or German-silver one measures two millimetres in diameter, and at the flaring end over two and a half millimetres. In cases where the external auditory canal is narrow, or where it is found necessary to remove a polypus which is situated within the tympanic cavity and which can only be reached through a comparatively small perforation in the membrana tympani, the great advantage of the slender silver canula is very apparent. But this is not the only advantage. In the double-mouthed canula the wire does not cut entirely through the polypus; a slender connecting cord of tissue always remains uncut between the wire and the septum which separates the two mouths of the canula. With this canula, therefore, the last step of the operation always consists in the tearing asunder of this connecting bridge of tissue—a procedure necessarily more or less painful to the patient. In the simple silver canula the wire, on being withdrawn into the tube, cuts the polypus off entirely at the point of seizure, all necessity for traction being thus done away with. As a result of this, the operation of removing a polypus from the ear is in very many cases an almost painless procedure. Finally, the employment of very fine malleable steel wire (size=No. 37), may be designated as the latest improvement which has been introduced in connection with Blake's snare. Wire of this size possesses all the strength required for the removal of the great majority of polypi, and at the same time causes far less pain to the patient, whenever it comes in contact with the healthy and very sensitive walls of the auditory canal or of the middle ear.

pushed in over the mass to this depth and tightened sufficiently to hold the polypus firmly in its grasp. Steady traction is then to be made, in the hope of pulling out the polypus, peduncle and all. In not a few cases this object will be attained; but even if the effort fail to remove the entire growth, at least as much of the mass will be torn off as would have been if the wire had been made to cut through the polypus instead of simply grasping it firmly. As soon as the bleeding has ceased, and the portion cut off by the wire loop has been removed with the bent forceps, the remainder of the growth is to be treated in precisely the same way as the first portion. The wire loop is to be applied again and again until the base of the growth has been cut away to the level of the surrounding mucous membrane or skin. In the first effort (or seizure) it is well to use traction, but if this effort fails to pull out the greater part of the polypus the subsequent efforts should be limited to cutting off as much of the growth as possible at each seizure, *no traction whatever being exerted upon the canula and wire loop.* If the polypoid mass springs from some portion of the external auditory canal it will be found as a rule decidedly firmer in texture and more sensitive than one of middle ear origin. In polypi of the latter variety we shall find that they spring more frequently from the upper and posterior portion of the middle ear (entrance to antrum) than from any other locality.

It is a good rule in practice not to resort to the use of caustics until the base or peduncle of the polypus has been cut away with the snare to the level of the surrounding parts (skin or mucous membrane). Furthermore, in deciding whether the peduncle has been cut away to the proper level, we are not to trust to the sense of sight alone; *the behavior of the peduncle, when circumscribed by the end of the probe, furnishes the only trustworthy guide to a knowledge of the exact relations which this peduncle bears to the surrounding parts.* When the mass has been so far extirpated that we cannot encircle it with a wire, we may, with benefit to the patient, resort to the use of caustics and astringents.

Before speaking, however, of the after-treatment, it would perhaps be well to consider for a moment the dangers, real or apparent, which surround the operative procedure just described.

As regards *hemorrhage* from the torn or cut surface of the mass, we need entertain very little anxiety. In malignant growths alone have I ever seen or heard of any loss of blood that could fairly be termed serious; and only once have I encountered anything like an arterial hemorrhage, requiring the use of a tampon or plug.

As regards the question of inflicting damage upon the apparatus of hearing in the middle ear, I have no doubt that clumsy and unskilful operative interference might result in serious impairment of the hearing. The hammer, however, and the firm ridge called Shrapnell's membrane, afford an excellent protection to the more deeply situated stirrup, which is by far the most important piece in the mechanism of the middle ear. Polypi are occasionally encountered whose peduncles include in their substance the handle of the hammer (the rest of the membrana tympani being destroyed). In such cases the wire must be applied with caution, and no traction whatever must be employed. The few polypi of this kind which have come under my observation were quite small, and were attached to the ossicle by rather slender peduncles. In one of them, however, I made the very mistake which I am now cautioning against (*i.e.*, I applied the wire to that portion of the peduncle which included the handle of the hammer), and only discovered my error by finding that the wire could not be drawn back into the canula. By cutting the wire loose from the instrument and pulling upon one end of it, no difficulty was experienced in disengaging it from the ossicle.

Besides hemorrhage from divided vessels and injuries to the ossicles, I know of no other danger which may arise in the course of the operation for removing an aural polypus.

As regards the *after-treatment*, this must be modified according to the location from which the growth springs. If the polypus grows from the cartilaginous portion of the outer canal (as a result, for instance, of an abscess in this locality), and is firm in consistency, the application of nitrate of silver in solid form to the base which remains after the removal of the fleshy mass, will act rather as a stimulant to further growth. Fuming nitric acid, applied cautiously but thoroughly to the base, is the only remedy upon which we can depend to arrest promptly a further reproduction of the growth. As the fumes of the acid are apt to prevent the operator from seeing clearly what he is doing, an instrument called a "porte-acid" has been devised which enables the physician not only to apply the acid accurately to the desired spot, but also to confine its action in great measure to the region immediately cauterized. This instrument consists of a slender glass tube (four inches in length, not quite two millimetres broad, and somewhat flaring at both ends), through which a platinum wire of moderately small size passes. One end of the wire is bent upon itself, so as to prevent the mop of cotton-wool, which is wound round it, from falling off. When the instrument is to be used, the wire should be first pushed into the tube far enough to carry the mop end of the wire well outside of the flaring end of the tube. The mop having been dipped into the acid, the other end of the wire is then to be pulled out far enough to draw the mop well back into the flaring mouth of the tube. The base of the growth having first been thoroughly dried, the flaring end of the tube should be placed firmly upon the raw surface, and, while in this position, the mop should be pushed down firmly against the part to be cauterized. The reaction which follows is very slight, and the pain of but short duration. The best way to remove the mop from the platinum wire is to burn it off in the gas flame.

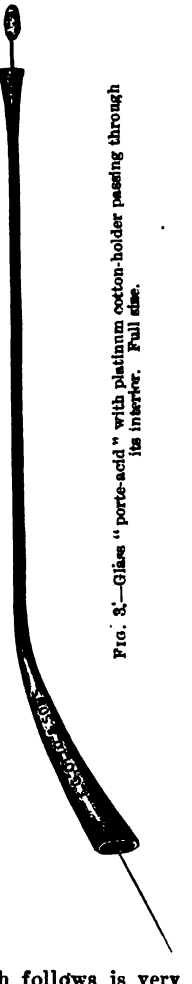


FIG. 3.—Glass "porte-acid" with platinum cotton-holder passing through its interior. Full size.

In a few cases of middle ear polypi, it will be found advantageous to apply nitric acid to the base of the growth in the manner just described. Where the base, for example, is unusually broad and firm in texture, nitrate of silver is apt to act rather as a stimulant to further growth, while nitric acid will much more surely repress the tendency to grow. In these cases,

however, *the acid should be applied with great caution.* The firm pressure, which it is perfectly proper to use in the case of growths in the external auditory canal, would here be likely to produce a very unpleasant reaction.

As regards the employment of such reagents as chromic acid, acid nitrate of mercury, acetic acid, sulphate of copper, etc., for the purpose of checking the growth of granulation tissue or polypi, my own experience has led me to abandon them all. Chromic acid and acid nitrate of mercury are very treacherous remedies; they seem to penetrate to a much greater depth than nitrate of silver, or even nitric acid, and are apt to be followed by considerable pain. Absolute alcohol cannot be used properly unless it be made at the same time to bathe all the surrounding healthy tissues. Its effects seem to be superficial and evanescent. In the great majority of cases, pure nitrate of silver, fused upon the end of a cotton-holder or probe in the form of a rounded bead, will be found the most convenient, most efficient, and least painful of all the caustics. Each application should be followed by the mopping process with the cotton-holder, in order that the caustic may not spread beyond the limits of the diseased locality.

Oftentimes a single cauterization will suffice to complete the levelling process begun by the wire snare. In a few cases the snare will be found to have done its work so effectually that the intermediate stage of the treatment—that of cauterization—may be omitted altogether. It should be clearly kept in mind that the caustic is to be used for the express purpose of destroying the superficial portions of the stump of the growth, in order to bring it down to such a level that the surrounding healthy mucous membrane may grow out from all sides over the mass, and so furnish it with a natural covering of mucous membrane.

That nitrate of silver also exerts a beneficial astringent action,—that it sometimes seems to restrain in a most remarkable manner the tendency to the production of lymphoid elements (pus or tissue-forming cells), cannot be denied by any one who is in the habit of using it much. In a large number of cases, however, it produces the very opposite effects. Hence the desirability of resorting as soon as possible to the use of pure astringents.

The third and last stage of the treatment consists in the application of astringents to the remaining stump of the growth. The parts are to be thoroughly dried with the mop of absorbent cotton, and then powdered burnt alum or iodoform (or a mixture of the two) is to be laid upon the dried surface pretty thickly. By moistening the end of the slender silver probe and then dipping it into the powder, one can readily take up quite a large mass, which will cling to the end of the probe with sufficient tenacity to enable the physician to transfer it to the desired spot in the middle ear or outer canal. These pellets of powder are to be applied again and again, until the granulating surface is thoroughly coated with the remedy. In a few cases I have observed that iodoform (finely powdered) has been able to completely arrest all further growth and all secretion of pus, when the alum had failed to accomplish the desired result. In my hands the iron and tannin preparations have not proved so efficient as the two remedies just mentioned.

If all these efforts fail to arrest the otorrhœa, we may pretty safely draw the conclusion that a carious condition of some portion of the temporal bone (the posterior end of the tympanic cavity, in the majority of the cases), or an undiscovered granulation-growth is the source of the continued discharge. In regard to the caries, it would lead us too far to enter into a study of this question in this place. In the case of hidden growths, our best course is to abandon all active treatment and to simply examine the ear at longer intervals (say once in three or four months). After a varying length of time the growth may attain such a size as to encroach upon some visible part of the ear, when it will readily be discovered if the physician examines carefully.

Finally, in a limited number of cases, the external auditory canal is so narrow, or the anterior or lower wall so prominent, that we cannot obtain a view of the spot from which the polypus springs, although the greater part of the growth can readily be distinguished and easily removed. In these cases we are quite likely to experience defeat, so far as the attainment of a perfect cure is concerned; but the removal of the greater part of the mass will, as a rule, greatly diminish the otorrhœa, and oftentimes also improve the hearing, for a period of several weeks or even months.

If I have said nothing about the removal of polypoid growths by means of the galvano-cautery wire, it is simply because I cannot see what advantage is to be gained by the use of this instrument. Blake's snare fully meets all the requirements of the case, and in the matter of simplicity and cheapness it is far superior to the complicated galvano-cautery. I have also omitted to speak of the different solutions of tannin, sulphate of zinc, acetate of lead, nitrate of silver, etc., which some authorities recommend as useful in cases of polypus. As I long ago abandoned their use in such cases, I have not thought it profitable to waste any time here in speaking of them.

RAPID AND FORCIBLE DILATATION OF CERVICAL CANAL FOR REMOVAL OF OFFENDING BODIES,

WITH DESCRIPTION OF INSTRUMENTS FOR THE PURPOSE.

By H. T. HANKS, M.D.,

NEW YORK.

Two years ago a patient of Dr. W. H. Hall, who had previously suffered from epilepsy, became pregnant. She had given birth to two healthy children before, and had carried them to full term without serious inconvenience to herself. At this time, however, the epileptic seizures became exceedingly frequent and alarmingly severe—so much so, indeed, that Dr. Hall and myself both decided that, since medicines had apparently no control in averting the attacks or mitigating their severity, the only safe and judicious course to pursue would be to cause the expulsion of the two months fœtus. The patient lived a few miles out of the city, and it was the wish of the family that Dr. Hall and myself should take full charge of the case without calling in the local physician. Under these circumstances it became a question with me how to safely and thoroughly accomplish this end and make but one visit myself, and cause as little journeying as possible for Dr. Hall, and not oblige any physician to call until the following day.

I finally decided to rapidly and forcibly dilate the canal, give a full dose of ergot hypodermically, and then remove the ovum by means of the placenta forceps or loop of wire.

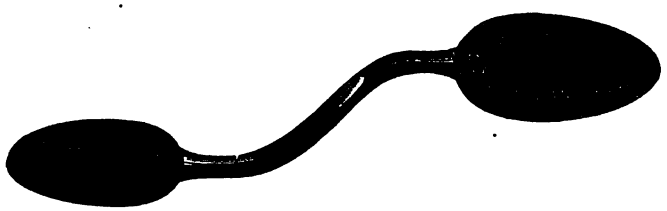
Knowing how little dependence can be placed upon Molesworth's, Barnes's, or the soft rubber air-dilators,

when they have been once in use and laid aside for a few months, and knowing from experience how well the healthy unimpregnated cervix uteri will bear rapid dilatation up to No. 24, American scale of bougies, without laceration, I decided to dilate in this case in the most rapid manner possible without injury to the parts involved.

We therefore anæsthetized the patient, introduced a speculum, seized the anterior lip, and in regular order introduced the common hard rubber dilators,* from No. 16 up to No. 22, then changed to the smaller sized rectal bougie, and from this to the next larger, and so on up to No. 10. At this time a full dose of fluid extract of ergot was given hypodermically, after which the placenta forceps were introduced and the ovum was quickly removed. The whole operation did not last forty-five minutes.

The patient made a quick and in every way satisfactory recovery.

Since this time I have witnessed the bursting of several of Molesworth's and Barnes's dilators, and thought much of hard rubber dilators, to take the place of these perishable soft rubber ones. I have therefore had the Messrs. Stohlmann, Pfarre & Co., of this city, manufacture for me a set of *ten* dilators, two of which are herewith represented attached to the double-curved handle.



Each dilator is hollow and more or less ovoid according to its size, as may be seen in the cut. The length varies from two to three and one-half inches; the diameter from one-half to two inches, in proportion to the length. The larger end of each is made to fit either end of the screw-handle rod, which is curved in opposite directions at each extremity, flattened on one side, for security of grasp, and about five inches in length.

In using these dilators it is absolutely necessary to have a strong tenaculum forceps in order to firmly fix the cervix. The Messrs. Stohlmann, Pfarre & Co. have made for me a very convenient tenaculum forceps which will be found to fully meet the requirements of each case, and has never yet been known to tear the cervix.

With this instrument I seize the anterior lip—one blade inside, the other opposite—fully one-third inch from the external os, and firmly fix the cervix, either with, or without the use of a speculum, according as it is expected to have much or little trouble in removing the contents of the uterus. I then gently but firmly force the smallest dilator into and through the external os, and entirely enter the cervical canal. This end is then withdrawn, and the opposite and next larger dilator is in like manner pushed into the canal. When this end is tightly held within the canal, the smallest dilator, which is now grasped by the hand, is unscrewed and a larger one is screwed in its place. Then the ends are again reversed, and the same course is pursued until the canal is of sufficient size to allow the quick and safe removal of the offending body.

* See MEDICAL RECORD, Sept. 25, 1875, page 655.

I have used this set of dilators with entire satisfaction in four cases. One patient I saw in consultation with Dr. J. R. Cypert. One in consultation with Dr. D. C. Comstock, and two in my own private practice, besides the one patient in which I used the rectal bougies as before mentioned, and in which the operation consisted in dilating in a similar manner.

The patient of Dr. Cypert had carried a dead three months fœtus for several weeks when the Doctor first saw her. She had lost much blood. He applied a tampon after introducing a small sponge-tent. On the following day I saw the lady with him, and on giving ether we easily dilated with these instruments here described, and in about thirty minutes removed the bones and some other portions of the dead fœtus.

The patient made a good recovery.

Dr. Comstock's patient was six weeks pregnant when attacked with uterine hemorrhage. He applied a tampon and gave anodynes. She had but little subsequent hemorrhage, but suffered from slight backache pains, and an offensive, dark-colored discharge from the vagina. On my visit I found the external os the size of the little finger, while the internal os was well dilated, and by making firm pressure a loose, fleshy body, the size of a pigeon's egg, could be felt near the dilated internal os. The patient was in good physical condition, and we decided to deliver the ovum without giving ether or using a speculum. The anterior lip was seized with but little difficulty, and the four smaller sizes of the dilators in regular order quickly introduced, and in exactly sixteen minutes from the time I took my place at her side the ovum was removed. It was found to have been filled with a large clot of blood which had completely obliterated the embryo.

My own cases were much like this last. In both, the question of relieving the patient from the danger of hemorrhage and hours of suffering, together with the saving of much time for myself, came up, and was decided for me by the patients, who were eager to have the anxiety and suffering ended.

One patient had lost "great quantities" of blood before my arrival. The instruments were used in both cases without ether, with success, and both patients did well.

In conclusion, I can recommend the dilators, and should advise their use, where the cervix is healthy, and it is necessary to remove:

1st. A retained small or large piece of placenta,
2d. A fibrous polypus or tumor,
3d. An aborted ovum or dead fœtus.

Even in cases where the child is viable, and it is found necessary (as in placenta prævia) to dilate rapidly, I am certain these instruments would accomplish quickly and safely, in judicious hands, what no other dilators have ever done.

149 LEXINGTON AVE.

ASSASSINATION OF A PHYSICIAN.—Dr. José Guirado, of Zurgena, province of Almeria, was brutally murdered on the 24th of last May. He was first beaten with clubs until he was nearly dead, and his head was then crushed to a jelly by means of a heavy stone. When the body was discovered a piece of paper, on which the words "This is the first of three" were written, was found pinned to the wristband. The victim was one of the purchasers of some hills that belonged to the commune, and this was the only apparent motive for the crime.

CLINICAL NOTES ON OPIUM HABITUATION.

By J. B. MATTISON, M.D.,

BROOKLYN, N. Y.

The following notes are believed to be the first ever presented from an institution exclusively devoted to the treatment of the disorder to which they refer. As such, they may have more than a passing interest.

A. B., æt. 32, physician, Minnesota; one year's habituation; maximum daily quantity, 5 grs. Morphia hypodermically; cause, migraine, with supposed cardiac lesion. The disastrous results of his addiction, which involved some very remarkable experiences—mainly mental—were noted in this journal, May 18, 1878. They were striking, somewhat exceptional, and may have been deemed overdrawn, yet doubtless were true; patient assuring us he was rapidly drifting towards insanity.

When Dr. B. presented himself for treatment his physical condition was good—an examination by Prof. Flint revealing only functional heart derangement—and being desirous of rapid abandonment, the morphia was withdrawn without the usual preliminary sedation, and, as a result, the attendant discomfort was much greater than in the other cases herein detailed. The initial distressing symptom was a severe cephalalgia—not of long duration—followed by cramps of the lower extremities, rectal tenesmus and restlessness. The remedies employed to meet these indications were bromide of sodium, chloral, and hot baths. They gave great relief, each exerting an influence for good in ameliorating some phase of the resultant nervous irritability. Chloral acted notably well as an anodyne, effecting marked and rapid relief to the gastrocnemial pain. The baths, temp. 100 to 110°, ten to thirty minutes' duration, as often as restlessness required, lessened greatly the general hyperæsthesia. No emesis; bowel relaxation slight. The nervous disturbance subsided in six days. Convalescence was rapid, only interrupted by severe sciatica, which proved rebellious to treatment until resort was had to superficial vesication over nerves affected—emp. canth., ½ × ¼, eighteen on one limb, nineteen on other, from hip to heel—when the pain departed and did not return. The same good result from like treatment under similar circumstances was noted in the RECORD, April 10, 1875. Patient was dismissed cured in less than a month. Tidings recently received report him doing well.

C. D., æt. 38, physician, New England; four to five years' habituation; maximum consumption, 16 to 20 grs.; morphia hypodermically per diem; cause, toothache; initial daily dose, five minims solut. Magend., never exceeding ten. This sufficed for six months, then gradual increase, reaching, in two years maximum allowance. The effects of addiction were intestinal, vesical, and sexual torpor; conjunctival irritation; loss of memory; mental slowness; great drowsiness, with disinclination to rising, and marked muscular twitchings, the latter sometimes so violent as to force him from his seat or a book from his hands. Disastrous results related largely to these latter symptoms, interfering with his vocation—not rising till nearly mid-day, forgetting his patients, falling asleep while making a call or giving office advice, etc.—and change for the better became imperative as a matter of professional standing and financial economy.

For one month prior to admission, Dr. D. had been reducing his daily quantum, until on entrance it was only about five grains. His general health not being much impaired, sedative treatment was at once begun, its effect secured, and the morphia withdrawn in five days. The principal sequelæ were moderate restlessness and lumbar pain. The therapeutics of the case included bromide of sodium, chloral, hot baths, and atropia hypodermically. The baths invariably relieved restlessness. Atropia, $\frac{1}{100}$ gr., deeply injected in the lumbar muscles, acted exceptionally well in mitigating the local discomfort. Chloral was not largely used, its effect being unpleasant, seeming to intoxicate. No gastric disturbance, and the bowels not relaxed until nearly a week after the morphia was discontinued. The restlessness subsided in 56 hours. Convalescence prompt, and patient dismissed; recovered in less than four weeks. Recent advices state: "I am well, . . . looking well and getting stout. Have not suffered from the deprivation of morphia, and have felt no inclination to resume."

E. F., æt. 42, physician, New York; *ten* years' habituation; maximum daily taking, 18 grs. morphia hypodermically; cause, peritonitis. The effects were alvine torpor—for years no evacuation without enemas; vesical and sexual debility; anorexia; indigestion; hemorrhoids—the hemorrhage sometimes profuse; mental depression; muscular weakness and emaciation; in general, a wreck-like state of mind and body.

On admission was pallid and weak. Tonic régime—strychnine, iron, and digitalis with generous diet—for ten days. Morphia reduced almost at once to six grains, without discomfort. Sedative treatment secured desired effect, and entire opiate withdrawal in eight days. During afternoon of last day's habituation—the final dose being one-third of a grain—had severe headache, of limited duration, relieved by hot sitz baths, and cold to the head. Moderate restlessness followed, subsiding in 48 hours. No other symptom of note. No vomiting; no diarrhœa. Treatment, bromide of sodium, hot baths, and general faradization. Patient made an astonishingly rapid recovery, and was dismissed cured in less than six weeks. In a recent letter he says: "Do you ask, 'does the old enemy ever assert power, and tempt me to the hypodermic?' Most gladly can I answer, 'No.' There is not the least physical desire for morphia."

The foregoing cases, fairly typical of opium habituation, present some features deserving detail. All had their origin in an opiate prescription. In a recent paper—*Med. and Surg. Reporter*, February 9, 1878—we expressed an opinion that 80% of cases of this disease had more or less directly a like inception. Our records furnish no exception. The care demanded in opiate prescribing is thus strikingly obvious.

The exceptionally ensnaring power of opium is shown in the fact that Dr. B.—a man of unusually fine physique, and possessed of sufficient stamina to survive Salisbury prison when the death-rate averaged 80%—found himself a captive after only *four weeks'* use of morphia.

The disastrous results of opium excess bear no regular relation to the extent of addiction, either as to time or quantity. Dr. B., after less than a year's habituation, gave decided evidence of mental deterioration. Dr. D., though more than quadrupling the former, presented nothing marked in that direction. The same obtains relative to inroads made upon bodily health. Dr. F., a ten years' habitué, was in much better physical condition than another physician, who, though only a four years' consumer, looked on admission like a patient well advanced in tuberculosis.

All these patients had made repeated, but futile,

efforts at self-cure. The result of institutional régime is a sufficient comment on its value. A query, often presented, relates to duration of treatment. If the general health, at the time restorative measures are adopted, be *good*, one month will, in most cases, suffice.

Tonics and sedatives constitute the therapeutic reliance. The effect of *preliminary* sedative treatment in obviating the discomfort of withdrawal is so satisfactory that we are most firmly convinced of its value. Patients express surprise regarding it. Dr. D. declared "he had no idea so much could be done in that direction;" and Dr. F., writing of his case, remarked: "What an effectual work, ... and brief, too, as effectual. I never could have believed it possible before I experienced the practical demonstration."

Bromide of sodium is preferred for its pleasanter taste. It is given, largely diluted, three—occasionally four—times in the twenty-four hours. The plan of frequent and prolonged administration—30 to 60 grs. every half hour, etc.—is not regarded with favor. The effect of the bromide being rather remote, this method incurs the risk of surcharging the system, and entailing unpleasant, if not serious, results.

The efficacy of hot baths has been alluded to. Their value is beyond dispute.

For removal of the muscular debility, we have found nothing equalling general faradization, twenty minutes séances daily. The sense of exhilarating comfort resulting is very decided.

Strychnia is always employed, with cod-liver oil, phosphorus, iron, digitalis, and quinine, as the case may demand; and out-of-door exercise, especially pedestrian, with varied social enjoyments, form valued adjuncts in treatment.

Our experience proves conclusively the efficacy of therapeutical resources in overcoming this formidable disorder, and warrants a favorable prognosis in all cases not complicated by organic disease.

PARRISH HALL, Brooklyn, N. Y.

CASE OF CANCER OF DUODENUM, WITH PERFORATION.

BY J. L. HICKS, M.D.,

FLUSHING.

R. E., aged 54 years, came to me on the 2d of May last with symptoms pertaining to dyspepsia and debility. He was a man of large frame, and presented nothing in his general appearance to arrest attention as the possible subject of any grave disease of any sort. He had during the past three years two or three attacks of intermittent fever, none of which confined him to the house for more than a day or two. On the present occasion, however, he seemed to exhibit some anxiety about himself, and I accordingly made a rather more detailed examination of his case than I should otherwise have done. I could find nothing, however, beyond the symptoms first spoken of, which were a sense of fulness after eating, which persisted for many hours; flatulence, with eructations; constipation, which had been more or less a life-long habit, and latterly loss of appetite, which had led him to be very irregular in taking food. Some four or five days after this visit to my office I was asked to see him at his house, where I found him in bed. He said he thought he had been having some fever (though his temperature at that time was normal), and complained of being very weak. He then spoke of a vague, dull pain in the region of the stomach, which he described as having its apparent centre in the *left* hypochondrium. This pain, without much variation in character or intensity, being at no time of an aggressive or lancinating type, persisted to the end, but was never accompanied by any special tenderness on pressure or evidence of tumor.

The only fact discoverable by manipulation was what seemed to be an unusually small liver. There was no history of jaundice, and no peritoneal effusion, no addiction to the use of spirits, nothing, in short, that would seem to point to organic hepatic disease. He said that some hydrochloric acid I had given him in bitters hurt his stomach, and the same effect was produced by wine or spirits unless largely diluted, and also by solid food of any kind. There was at this time, however, no vomiting or nausea, but simply the gastric discomfort above noticed. A few days after my attention was called to the character of the alvine discharges, which were black, grumous, and very offensive, and having the appearance of blood from some point high up the intestinal canal, and from this time forth every evacuation contained blood. The debility and associated symptoms continued without much change from day to day until the 21st of May, when I was called to him in the middle of the night, and found him supported by his wife in bed upon a chamber vessel, and apparently dead; breathing had ceased, the heart had stopped, and he was cold, bathed in profuse sweat. Instantly placing him in a horizontal position, vigorous restorative measures were used with ultimate success, and shortly after regaining consciousness there was an enormous discharge from the bowels, consisting for the most part of blood. A less severe syncope from the same cause, and followed by a large evacuation of blood, occurred about a week before his death.

His condition was now one of extreme prostration and exsanguination. He took and retained food, chiefly milk, broths, and meat extracts, up to a little more than a week before death, when he had a turn of vomiting; the matters rejected containing a little blood. This attack was repeated within two or three days, and more blood was thrown up, and finally a very copious vomiting occurred on the morning of the 18th of June, when not less than a pint of blood was ejected from the stomach. Discharges of blood in small quantities still continued from the lower bowel, and on the 21st of June the patient died.

Frequent examinations of the urine developed no evidence of renal disorder, the only significant fact discovered being the presence of indican in amount sufficient to lend additional probability to the suspicion of cancer, which daily observation of the patient had suggested as one of the possible facts in the case, while the order in which the hemorrhages occurred, first from the bowel, then from the stomach, the latter not until a comparatively short time before death, gave weight to the conjecture of the existence of duodenal disease in which ulceration was a probable factor. This view of the case was concurred in by Prof. Flint, who saw the patient with me two or three days before death.

Autopsy, forty-eight hours after death. Present, Drs. Goodridge, Merritt, and Badger. Body extremely exsanguinated and emaciated, though a pretty considerable thickness of fat, say one and three-fourths inches, still remained over the abdominal walls. Upon opening the cavity of the abdomen and drawing aside the folds of the greater omentum, a small quantity of brownish chyme-like material was seen lying upon the intestinal folds, but no lymph or other inflammatory

products presented themselves. The stomach was distended, partly filled with fluid (chyme, but no blood), and somewhat dilated. Its walls were not notably thinned, and its muco-glandular structure appeared normal. The pylorus and the first four inches of the duodenum were natural, excepting a slight reddening of the coats of the latter. Occupying the middle third of the duodenum was found an irregular nodulated schirrous mass, probably two and a half inches in average diameter, having matted into its substance a portion of the pancreas, which appeared to be involved in the structural degeneration of its neighboring organ. At the proximal end of the mass, or that nearest the pylorus, was a sacculation, such as might fit half an inch of the end of the thumb, in the bottom of which was an ulcerated opening, with rounded internal margin, and having rather a linear than a circular punched aspect. This opening was about half an inch in length. The calibre of the gut involved in the diseased mass was considerably diminished. The liver was unusually small, and presented no evidence of disease, so far as could be determined by ordinary inspection. The kidneys were healthy; other organs not examined.

Cancer of the duodenum, unconnected with cancer of the stomach, is undoubtedly a very rare circumstance. Certain it is that authorities, so far as my research has extended, have very little to say on the subject. Cancer particularly of the *head* of the pancreas is a somewhat more frequent occurrence, and in the present case the question suggests itself, whether the disease of the duodenum might not be consecutive to that of the pancreas. The preference of cancer to a certain extent for glandular structures gives perhaps some little plausibility to the suggestion.

The pouch-like diverticulum referred to, in the bottom of which perforative ulceration took place, and which at first view might appear like a mechanical dilatation from the arrest of fluids from the narrowing of that part of the gut beyond it, may also be accounted for as a congenital formation, as similar sacculations are occasionally found in that portion of the intestine.

The remaining points worthy of notice are the absence of jaundice, which might have been expected from the amount of disease surrounding the ductus communis and pancreatic duct and the absence of fatty stools, which in a certain proportion of cases are associated with pancreatic disease.

Reports of Hospitals.

PRESBYTERIAN HOSPITAL, PHILADELPHIA, PA.

SERVICE OF H. LENOX HODGE, M.D.

(Reported by W. C. HOLLOPETER, M.D., House-Surgeon.)

RARE CASE OF STRANGULATED HERNIA, WITH OPERATION—RECOVERY.

MRS. S., æt. 39, white, born in England, married, was admitted to the hospital January 5th. General health feeble. Has had seven children, and aborted two weeks before admission, at the third month. Has had an inguinal hernia for several years, which she could easily reduce herself, and for which she never used a truss.

On Wednesday, January 2d, in the morning, the hernia came down and she was unable to return it by her ordinary methods. Failing herself, she sent for her physician, who made several attempts at reduction, while the patient was under ether, but without success. Three days after its strangulation, at the physician's suggestion, she was brought to this hospital.

Upon examination, after her admission, the pulse was 108 and feeble, the tongue coated and dry, the abdomen flat and somewhat tympanitic. The tumor was in the right inguinal region, and was sensitive to the touch, and tense. The patient had never vomited, but had been taking "sleeping powders"—morphia, the day before. She had a passage on Friday evening, natural, well formed, and brown in color—the first since Wednesday evening.

It was determined to make an exploratory incision without further delay, or attempts at taxis, and thus determine the condition of the tumor. On exposing the sac, it was found to be the size of a hickory-nut, of a dark pearly color, very narrow at the neck and adherent at the internal ring. The layer of fascia outside of the sac was adherent to the sac and to the ring. The sac evidently contained but little fluid.

The ring was nicked with the knife, but finding that the sac remained tense, and that reduction did not take place easily, the sac was opened and found to contain flocculi of lymph and a purulent fluid. The intestine was ashy colored and adherent on all sides to the neck of the sac. The tumor was carefully examined, and found to be not a knuckle of intestine, but simply the *strangulated anterior wall of the bowel*. It was thought advisable to make an attempt to return the intestine. The adhesions were broken up by means of the broad grooved director, and the neck of the sac was nicked with the knife. Upon gently handling the intestine the tissues yielded, a portion of the intestine, about the size of a pea, coming away. A broad grooved director was passed into the opening of the intestine, and no stricture was now found to remain at the neck of the sac. That portion of the intestine which was held fast to the ring by adhesions was allowed to remain in the wound. No fæces escaped, but only a small amount of muco-purulent fluid. The wound was allowed to gape in the centre, and the ends brought together by means of a few sutures.

January 6th.—Tongue moist, with whitish coating. Right side of face flushed. Abdomen not so flat as before; resonant upon percussion and exceedingly sensitive to the touch. Had a passage during the night, partly formed, dark colored, and somewhat large in quantity. Temperature, 102½°; pulse, 100; respiration, 22. Vomited several times during the night. Passed her urine twice during the after-part of the night. Was very restless and constantly twitching. Drank milk and beef-tea. Wound showed slight oozing of serum, and some swelling of surrounding parts. No appearances of fæces at the wound.

January 7th.—Slight moisture over skin. Flush on face gone. No movement of bowels. Abdomen considerably distended, tympanitic, and painful to the touch. Drew off her urine for the first time. Urine natural. Leucorrhœa excessive. Suppuration of wound healthy. No fæces apparent at opening of bowel, and no vomiting. Some redness, pain, and swelling of abdomen, but not so much as on the day before. Removed one of the sutures. Temperature, 101½°; pulse, 98; respiration, 20.

January 8th.—Tongue nearly clean, and moist. Abdomen not so tympanitic, less redness, and parts less swollen. Wound discharged freely. Removed

the remaining sutures. Temperature, 100½°; pulse, 88; respiration, 20.

January 11th.—Abdomen almost normal. Wound doing well. Less swelling. Discharge healthy. Wound granulating from the bottom.

January 12th.—Has had no movement of the bowels for a week. Gave an enema without any result. Wound still doing well.

January 13th.—Second enema administered, which resulted in a free evacuation of the lower bowel. Passage normal in quantity and quality.

January 15th.—Wound healing from the bottom. Abdomen natural. Temperature and pulse normal. Continued to draw urine. Gave an injection resulting in a thoroughly healthy stool.

January 30th.—Wound nearly healed. The discharges thin and small in quantity. General health good. Passes water naturally. Menstruation has begun.

February 4th.—Wound closed. General health good. Appetite excellent. Bowels act normally.

February 10th.—Discharged entirely cured.

While in the hospital the patient complained of a sickening sensation in her stomach, which she attributed to the presence of a tape-worm, several segments of which she actually passed while in bed. A short time after she left the hospital her physician succeeded in obtaining several large segments, the longest being sixty inches in length, with two other pieces nearly as long. Barring this inconvenience, she is at present enjoying unusually good health.

Progress of Medical Science.

NITRE-PAPER FUMIGATION AS AN EXPECTORANT.—The value of nitre-paper fumigation as an expectorant has, according to Dr. Duckworth, been of late years too little recognized. In those cases of senile bronchitis in which prolonged fits of violent and exhausting cough are ineffectual for the clearance of the trachea and bronchial tubes, and in which the irritation thus produced is sometimes sufficient to induce asthmatic paroxysms, this treatment will be found especially applicable. Painting the paper with several coats of Friar's balsam has been found a useful addition. The coarsest brown paper procurable is recommended, the old cordage in it proving of value in giving off tarry, empyreumatic fumes, and these, together with the oxygen from the potassic nitrate, and the benzoic acid from the compound tincture of benzoin, form an excellent stimulant smoke for inhalation. A piece of the paper, not less than four or five inches square, should be used each time, being burnt behind the drawn bed-curtains. The value of warm cordial drinks is also alluded to, getting their expectorant action by stimulation of the gastric branches of the vagus.—*The Practitioner*, May, 1878.

THE PATHOLOGY OF INFLAMMATION.—A further contribution to this subject, by Dr. Senftleben, has just appeared in *Virchow's Archiv*, important, not only for the care which the investigation displays, but also for the clearness with which it corroborates the views of Cohnheim. The observations were made upon the cornea of the rabbit, and chloride of zinc was used as the cauterizing agent, the cornea being hardened in chloride of gold. The most important element in the researches is the discrimination of the processes of inflammation and reparation of the damaged tissue. Both these go on in curious spike-like processes, but it is asserted that the distinction between them is most conclusive. The nuclei in the regenerating process are a long oval in form, much less deeply tinted than those of the wandering round cells, and constantly show three or four nucleoli. On the other hand, the nuclei of the wandering round cells are smaller and tint much more deeply. Most of the cells contain two, three, or four nuclei, lying close together, and often distending the cell. The arrangement of the cells in the two processes is equally distinctive. In the process of regeneration the nuclei are far apart, while they are much closer in the inflammatory process, and the closer the more intense it is, so that they may come to be actually in contact. The course and arrangement of the spikes of cells are also in the two cases different. Finally, another characteristic of the regenerative process is that at the extremity of the spikes, the protoplasm often exhibits fibrillation, while no such appearance is ever seen in the inflammatory process. The regenerative changes go on concentrically and uniformly in the entire periphery of the cauterized area, and by this the corneal corpuscles which have been destroyed are restored, so that the cauterized area after a certain time presents a completely normal appearance. Senftleben concludes that the whole of this reparative process may go on without the presence of wandering corpuscles. The fixed corneal corpuscles proliferate, but only produce other fixed corneal corpuscles, never round pus-like cells. The path by which the wandering cells enter is threefold; first, by the nutritive channels of the cornea; secondly, between the fibrillæ of the cornua; and thirdly, along the nerves. Their number varies with the intensity of the inflammation. In their origin the fixed corpuscles take no part. If the inflammation is intense, portions of the cornea may be entirely destroyed by them; but if it is moderate, the cells which have entered may disappear, and the remaining corneal tissue may be repaired by the fixed corpuscles. Thus the latter play a reparative, the round cells a destructive part. On the presence of the round cells turns the distinction between the two processes, but they are also accompanied by characteristic macroscopic appearances. The inflammatory process, with its abundant cell-infiltration, is indicated by opacity of the cornea; the process of reparation, with participation of the fixed corneal corpuscles, by increased and increasing transparency. There are but two conceivable sources of the round cells—the episcleral vessels and the conjunctival sac. The passage of cells from the conjunctival sac into the cornea has been rejected as untenable by almost all observers; but some observations of Senftleben go far to demonstrate that such a passage does occur under certain circumstances, and that both of these sources may under different circumstances furnish the wandering cells.—*The Lancet*, May 18, 1878.

ACHROMATOPSIA AND METALLOSCOPIA.—M. Charco has ascertained that, in hysterical patients, the application of metallic plates, which have a controlling influence on the hysterical cutaneous anesthesia, cause the troubles of retinal sensibility to disappear, but only during the application of the plates. M. Charcot also observed that metallic applications cured the achromatopsia accompanying cerebral hemianæsthesia (lesion of the posterior portion of the internal capsule) as well as those dependent upon hysteria.—*La France Médicale*, April 17, 1878.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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LEGAL REGULATIONS FOR THE PRACTICE OF MEDICINE.

V.

In this, the concluding article of the series, we propose to confine ourselves, as far as practicable, to those regulations which are not only defined, but can be enforced by law; although we may allude to some which should be compulsory. For instance, the degree and title of Doctor of Medicine cannot rightfully be obtained in this State, except after three years' study in the office of some competent physician, attendance on two full courses of medical lectures, a satisfactory examination in all the branches of medicine, surgery, and midwifery, the possession of a good moral character, and the attainment of twenty-one years of age. Hence, the State should protect the name and title of Doctor of Medicine, and any one who falsely assumes it should be liable, not only to prosecution, but also to proper punishment.

The law of 1874, if rightfully enforced, enables us to do all this, for it declares that "every practitioner of medicine or surgery, in this State, except graduates of some chartered medical school [of this State], or licentiates of some incorporated medical society [of this State], shall be required, and are commanded, to obtain a certificate from the censors of some one of the several medical societies [which had censors entitled by law, previous to May 11, 1874, to make such examinations], which certificate shall set forth that said censors, after due examination, had found the persons interrogated fully qualified to practise all the branches of the medical art mentioned in it; and such certificate *must be recorded* in a book provided and kept for the purpose by the county clerk of each county in the State."

Hence, it is the duty of the censors to have a list of all persons so recorded, and for the president of each county medical society to prosecute all unregistered persons who are now practising without the possession of a diploma, license, or recorded certificate. The censors of each county medical society, aforesaid, are obliged by law to notify all practitioners of medicine and surgery of the terms and requirements above mentioned, and request such persons so notified to comply with them within thirty days after such notification; and if all such persons practising medicine and surgery within this State, shall not obey said legal request or command within thirty days, they "shall thereafter be subject to all the provisions and penalties prescribed by this act [of May 11, 1874], for any violation of the same, and the president of the society making such request" [or issuing such legal command], is required at once to commence proceedings against all delinquents by lodging complaints against them in the hands of the district attorney. The only latitude allowed the censors, before handing in the names of delinquents to the presidents of the county medical societies for prosecution, is such further time as may be allowed by special arrangement with said censors, not exceeding ninety days, in addition to the previous thirty days. But, in order to obtain this stay of proceedings, the notified persons must acknowledge the summons, and apply for and obtain the law's delay. The penalty for the first offence is a fine of not less than $50, nor more than $200. For any subsequent offence, not less than $100, nor more than $500, or by imprisonment of not less than thirty days, or both by imprisonment and fine."

These provisions of the law are so clear and simple, that the wonder is that they have not been carried out in every county of the State long ago. Almost every county medical society has been grossly negligent, and that of the Medical Society of the County of New York only less so.

In this county the purchase of a business directory, the employment of a person to make personal service of the notices or summons, and the printing of a sufficient number of copies of the law, would have been all the expense that would be required. The names of all who neglected to notice the first summons should have been reported at once by the censors to the president, who should immediately have placed the list in the hands of the district attorney for prosecution.

Those, and those only, who acknowledged the first summons should have been allowed the further legal grace of ninety days. Judgment for the first and lesser penalty should have been entered up against the first delinquents, and an immediate second summons should have issued, and the second and greater penalty enforced against the neglectful ones.

The only hard work of the censors would have commenced when applicants for examinations and certificates commenced to apply. But, according to the laws of the State of New York applying to the medical societies of the State and counties of New York, no license, and doubtless no certificate for medical

practice can be issued to any person, except those of good moral character, and who will solemnly declare that he or she will honestly, virtuously, and chastely conduct themselves in the practice of physic and surgery. This might reduce the number of applicants.

From May 6, 1844, to May 11, 1874, there was no necessity for medical education in the State of New York, except for those who wished to obtain a degree of Doctor of Medicine, or a license from the State or some county medical society, and any person was allowed to practise physic and surgery without a diploma or license, being only responsible for gross ignorance, immoral conduct, malpractice, and prescribing while in a state of intoxication.

The ordinary laws of the State, and those applying to chartered medical societies and colleges, have always required some evidence of moral character from all practitioners of medicine and surgery, and the law of 1874 cannot and should not dispense with it. The by-laws of the medical societies of the State and counties of New York also require of the medical man that his character should be that of a gentleman, exempt from gross vulgarity of manners, habitual drunkenness, swearing, gambling, and every species of debauchery. He is also disbarred for felony, misdemeanor, and if he has incurred penalties for heinous crimes. A physician in indigent circumstances is not permitted to embrace or exercise any business which will degrade the character of his profession; such as keeping a tavern, lottery office, gambling-, victualling-, or play-house. Any low trade or servile mercenary occupation is incompatible with the dignity and independence of medical avocations. In such extreme and derogatory situations a physician forfeits the privileges of his profession.

The law of 1874 also reaches those apothecaries who make a practice of prescribing for almost all the minor and some greater ailments. The only restriction upon this liberty which can be morally, but not legally, urged in a democratic and republican country, should be inability to pay a physician's fees. Copies of the law of 1874 should be served upon all apothecaries, and those who are determined to practice medicine should be obliged to take out a certificate of qualification from the censors. But no certificate should be issued to apothecaries who deal in patent proprietary medicines, secret and quack medicines or nostrums, for this is the great disqualification which prevents physicians who keep drug-stores and apothecary shops from obtaining membership in county medical societies.

The vendors of quack medicines and nostrums who assume the title of doctor can and should be prosecuted and forced to drop the title, at least; and it would seem that those unlicensed persons who advertise so widely in the *Herald* and *Staats-Zeitung* can most easily be dealt with, for their offences are patent, and widely and openly published.

The great difficulties in the way of enforcing the law of 1874 are the timidity of the censors, the belief of the lawyers and juries and judges in the idea that any one has a right to practise medicine, and the unwillingness of all to take any extra amount of trouble.

DIPHTHERIA AND SEWER-GAS.

Dr. W. Snively, physician to the Pittsburg (Pa.) Board of Health, lately read a paper on the cause of diphtheria in an outbreak of that disease in Pittsburg during the year 1877. Out of 856 cases, the total number reported, there were 366 deaths. Of these, 457, with 141 deaths, occurred in a particular district of the city in which the sewerage was almost criminally defective—*i. e.*, there was insufficient grade, inadequate diameter of the main at certain points, absence of traps at the street drops, private connection-points and main termini, while the man-holes were tightly covered and there was an utter lack of ventilation. Slaughter-houses near the termini drained their offal and refuse through connections having no traps; and one of the latter emptied directly into an untrapped drop. Previous to last July, diphtheria had prevailed in only an ordinary number of cases. The epidemic set in during July, and raged about five months. During most of this period one main was choked for a distance exceeding 2,000 feet. Two heavy rainfalls occurred in July, two in August. Dr. S. infers from these data that sewer-gas emanations, propagating the disease in the poisoned human system, was the cause of that epidemic. He explains that heavy rains caused choking of the mains, and expulsion of stagnant sewer-gas into the dwellings through the private connection-pipes. He very properly insists that ventilation of the mains is of the greatest importance in preventing accumulation of sewer-gas, and its consequences, no matter how well constructed the sewer otherwise may be. Undoubtedly thorough main ventilation is of primary importance. But 'trapping' and ventilation of the *connection-pipes* are of equal moment, when there is danger from heavy rains forcing the gas, which may have been generated, into the dwelling. Sewerage is a subject which has been sadly neglected in practice, but we hope that later-day experiences, and the valuable advice of our sanitary authorities may soon bring forth ripe fruit and thus add another triumph to those of preventive medicine.

THE NOISY ELEVATED RAILWAY.

There is hardly a possibility of the existence of a convenience without a corresponding inconvenience, and generally the sweeter the rose the sharper the thorn. With the progress of civilization and the increased luxuries of cities, we have the inevitable association of noise, bustle, and all the other accessories of nervous strain. Perhaps never before was the in-

convenience of the latter more forcibly or suddenly presented to the people than in the running of the steam-cars upon the elevated railroad in Sixth avenue. In fact, the matter is such a serious one, that it is arousing the indignation of the people along the entire route, and there is such a demand for the lessening of the racket that there is a likelihood of a speedy mitigation of the evil. Partly from a respect for public opinion, but mainly for policy's sake, the officers of the road are instituting experiments in places by placing felt and other substances under and alongside of the rails, with the view of lessening the vibration of the roadway and by "petticoating" the running-gear to deaden its sound. So far, some success has rewarded their efforts, but, in the face of a disappointment that better results have not been obtained, it is gratifying to know that the directors are willing to continue their good work, and use their best efforts to secure the desirable end.

THE CARE OF INFANTS DURING WARM WEATHER.

THE publication by the Health Board of the circular in relation to the care and feeding of infants during the hot weather is a timely reminder of the necessity of the measure, and an illustration of the real utility of a centralized authority on matters of hygiene. It is a fortunate circumstance that the Board, composed as it is of gentlemen of high standing in the profession, is so well calculated to minister to the wants of the community, and is so well entitled to its respect and confidence. There is no doubt that the widespread circulation of the simple rules will be the means of saving hundreds of lives, which would otherwise be sacrificed to ignorance. We do not recollect having seen any instructions of their kind better calculated to meet the requirements of the case. A good purpose would be served, if all the daily papers would republish the document, and place the excellent advice within reach of every mother in the land.

HOW THE HUNTER'S POINT NUISANCE IS BEING ABATED.

Now it appears that the proprietor of one of the stench-breeding establishments at Hunter's Point, who has recently broken his promise in regard to the manufacture of sludge acid, pleads, on a second indictment, that there was a significant misunderstanding in his mind as to the exact bargain he had made; that, in fact, he did "not pledge himself to abstain entirely from the use of sludge acid." To prove that he has made some progress in the right direction, he now guarantees to remove his establishment, and cease, entirely and absolutely, the manufacture of the fertilizers in Newtown Creek. In view of this remarkable concession to justice, the Court has determined to suspend judgment for a month, and give this bold offender another chance to keep his promise. We wonder if the Health Board will be blamed for this at the next session of the grand jury.

Reviews and Notices of Books.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, 1877.

THE annual volume containing the proceedings of this Society is again to hand, and will be welcomed by the profession. The communications comprise over thirty interesting papers, many of which emanate from members justly regarded as authorities upon the subjects presented. As many of our readers may desire to be reminded respecting the subjects treated and the names of the contributors, a brief notice of the volume will be made for that purpose. Taking the papers in the order presented, we find that Dr. R. W. Pease draws attention to his successful treatment of strictures of the urethra by incision, in preference to dilatation, and includes a tabulated statement of forty-five cases under his treatment. Two papers on the operations for closure of the hard and soft palate are recorded by Dr. N. Van Derveer, of Albany, and Dr. D. H. Goodwillie, of New York city, illustrated by wood-cuts. Dr. H. T. Hanks offers a tabulated table of cases of ante-flexion with relief of dysmenorrhœa. Dr. Hanks claims many advantages for his method, which he describes as simple and safe, and one that can be performed by any intelligent physician, even though he may not claim to be a specialist. Dr. John Ball follows with a kindred subject, advocating forcible and rapid dilatation of the cervix uteri for the relief of stricture and other uterine troubles. Dr. Thomas R. Pooley reports a case of irido-choroiditis in the puerperal state. Dr. S. L. Parmelee describes a case of punctured wound of right side, causing injury to diaphragm, lung, and liver. Dr. J. B. Graves contributes a paper "on a Fracture of the Base of the Skull," which was followed by a discussion, that will be read with interest. Dr. P. R. H. Sawyer also read a paper on this subject. Dr. Austin Flint placed before the Society his views on acute pneumonia, which he regards as essentially a fever, and not purely a local inflammation. He urged this doctrine from a pathological standpoint, as important in this respect, that it leads the practitioner to regard the rational object of treatment to be the essential disease, that is, the fever, rather than its local manifestations; in this way pathology is brought into unison with therapeutics based on clinical experience. This important paper drew forth an animated discussion from the members, one of whom expressed the opinion that the doctrine advanced by Dr. Flint would meet with the almost universal approval of the profession. Dr. M. P. Jacobi gave a history of two cases of convulsive disease without convulsions. Dr. Ed. H. Parker reviewed the question of heredity as an element in the production of crime and pauperism. "Some Practical Points in the Treatment of Stone in the Bladder," with analysis of eight new cases, was presented by Dr. J. W. S. Gouley. Dr. George Bayles, on the use of amyl nitrite in pertussis, is followed by Dr. C. H. Giberson, on a fatal case of scarlatina treated by cold baths. Dr. Alexander Hutchins draws attention to the drug jaborandi, and its power to produce diaphoresis, when desired, in any form of malady. A means of rendering vaginal injections safe and efficient, is described by Dr. Frank P. Foster. Dr. F. Hyde has a paper on some of the morbid conditions of the prostate glands and their treatment, and Dr. Norman L. Snow describes a case of pseudo-membranous laryngitis in a child. Dr. Lewis

Post calls attention to his successful treatment of gangrenous sores by tar fumigations. In this case the sores were very persistent, and had defied the usual modes of treatment—but at once yielded to the influence of the fumigation, and at length healed up. In a note to this paper, Dr. Post stated that he was sufferin from ill-health, caused by a sore just below the glottis, and he attributed this laryngeal trouble to his inhaling the poisonous emanations from the gangrenous wounds referred to in his paper. Dr. Post had a strong suspicion that such was the case, as he was at a loss to find any other cause to which to attribute the trouble. Dr. C. G. Pomeroy speaks favorably of the use of hydro-chlorate of ammonia (ammoniæ murias); he describes its therapeutic properties, and suggests its use in a wide range of cases.

The remaining papers are as follows: Dr. H. G. Piffard, On the Nature and Treatment of Lupus; Dr. Ira F. Hart, On the Hereditary Transmission of Disease; Dr. James C. Hutchinson, On Hæmophilia; Dr. I. Parsons, Experience in Arm and Shoulder Presentations; Dr. G. Burr, Wounds of the Knee-joint; Dr. H. N. Eastman, On the Action of Mercury; Dr. F. T. McFarland, On Opium Inebriety; Dr. W. H. Bailey, on Fatty Embolism; Dr. A. O. Kellogg, On Melancholiacs and Suicides. With such a varied list of subjects, the fault cannot lie with the matter; there is no necessity for speaking well of the work; in fact, it is one of the most interesting volumes that have been issued for many a year.

THIRTY-SECOND ANNUAL MEETING OF THE OHIO MEDICAL SOCIETY. 1877.

ASIDE from routine matter of purely local interest, Dr. Thomas W. Gordon's paper on the "Antipyretic Powers of Sulphate of Quinine" contains some observations that practitioners at large will find it worth the while to glance at, particularly as the discussion turns upon the advisability of administering large doses of the drug, and as the experience of the ablest men in the profession, South and West, is cited in justification of the practice. That such had been the practice of surgeons in the service of the United States, even before the example of Vogt, of Germany, could be quoted in its favor, is a fact familiar to those who have taken the trouble to look into the subject; but the experience of so many members of the profession in the ordinary routine of civilian medical work has not, so far as our recollection serves, been hitherto rendered accessible to the average practitioner. Dr. Tilden, of Sandusky, has given as high as 40, Dr. Holmes, of Florida, 80, and Dr. Suppington, of Memphis, Tenn., 80 grains at a dose, without producing any untoward result. Dr. Kingstone, of Missouri, is reported as having administered 200 grains in twenty-four hours, in a case of cerebro-spinal meningitis; the patient recovered. From 30 to 60 grains at a dose has frequently been given in the army, in cases of pernicious intermittent fever. Drs. S. S. Gray, S. F. Forbes, S. C. Ayres, J. H. Pooley, K. C. Scott, and C. S. Muscroft have papers on "Milk Sickness," "Manipulations in the Reduction of Dislocations," "Paracentesis of the Cornea," "Perityphlitic Abscess," "Purulent Ophthalmia" and the "Prevention of the Spread of Syphilis."

A PRACTICAL TREATISE ON AURAL SURGERY. By H. MACNAUGHTON JONES, M.D., of Cork, Ireland. 167 pages, 12mo.

THIS short treatise is a fair representative of a class of books of which, unfortunately, we nowadays see only too many. It commends itself to favorable criticism simply and solely because it advocates no harmful or rash measures. One seeks in vain, however, for something new or specially characteristic of the writer's own experience. If our knowledge in this, as in other branches of medical science, is to be materially advanced, it will certainly not be by the publication of such works as this.

JAHRESBERICHT ÜBER DIE WIRKSAMKEIT DER (FRÜHER EVERS'SCHEN) Augenklinik im Jahre 1877; von Dr. H. SCHOELER, Doc. a. d. Univ. zu Berlin. Berlin, 1878. H. Peters. 8vo. 58 pp.

AFTER giving a table of the operations performed in the institution, Dr. Schoeler presents the history of a case in which, for the first time, the cornea of a dog was transplanted into a human eye successfully. After the insertion of the cornea into its new position, the wound was entirely covered with a flap of conjunctiva. Six weeks later a peritomy was performed, so as to cause the disappearance of this artificial pannus. The result was so far successful that the patient was enabled to recognize the movement of the hand at six inches. Several cases, showing the advantages of conjunctival flaps in the treatment of wounds of the sclerotic are narrated. In conclusion, Dr. S. gives very extensive details of a new operation, neurotomia optico-ciliaris, devised by him for obviating the danger of sympathetic inflammation. This operation is intended to replace enucleation in many cases. He has performed the operation ten times, and in only one of these, notwithstanding the complete anæsthesia of the cornea, was there xerotic keratitis. In this case the bulb was not covered by the lids for a long time, in consequence of an effusion of blood behind it.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF GEORGIA. TWENTY-EIGHTH SESSION, 1877.

SAVING the fact that our medical *confrères* of the fervid latitudes are a little given to orations and to the construction of rhetorical periods, this 198-page pamphlet of the work of the profession in Georgia contains an amount of original matter, that puts it in favorable comparison with similar reports recently noticed in these columns. But those who turn over its pages expecting to find the promised paper of Dr. J. C. Le Hardy, "On the History, Causes, Nature, Pathology, and Treatment of Yellow Fever," considering exclusively the epidemic of 1876 in Savannah, will be grievously disappointed, the dissertation having been deferred until next year—a thing to be the more regretted on account of some intimations in scientific journals that Dr. Le Hardy would demonstrate the inutility of quarantine, besides presenting a serried host of inductions as to the origin of the disease at its various southern centres of activity. The articles of practical interest are so numerous, that it is not easy to discriminate between them. Dr. A. W. Calhoun has a disquisition on "Defects of Hearing and other Evils as the Results of Enlarged or Hypertrophied Tonsils," which, as both the symptomatology and the mode of operation are very fully and simply described, is a real contribution to medical literature, and one that should be carefully read by young practitioners. Dr. Calhoun discountenances and discards all such complicated instruments as tonsillotomes, on account of the great trouble and inconvenience of applying them, and sketches an operation with a pair of double-hooked forceps and the common long-handled, probe-pointed, curved bistoury, that old practitioners even will find worth perusing. Dr. T. F. Walker describes the case of a woman, æt. forty years, in which a transverse rupture of the womb occurred through protracted labor; the infant, which had been dead

for some days, made its exit through the lacerated opening. There was no post-partum hemorrhage of any consequence, and the patient rallied readily from the anæsthetic, though she was afterwards stupid for several hours in consequence of the exhaustion. She was put upon a supporting treatment of brandy, quinine, and opium, with good nutriment, and survived seventy hours without any suffering. There was no autopsy. Dr. E. L. Bardwell describes an operation for occlusion of the vagina, which proved successful. Dr. C. B. Leitner has a paper on the "Treatment of Carbuncle," in which he reports an application of the cupping-glass in several cases, and a subsequent washing with solution of carbolic acid, one part acid to eight parts water, as having been followed by excellent results. He exhausts the air until all the matter in the cribriform cells has been drawn into the glass, which in one case under treatment amounted to four ounces. The internal remedies employed in conjunction with cupping, were iodide of potassium, quinine, and iron. Dr. Johnson has a paper on "Stricture of the Urethra," in which, after discussing the Otis and Maisonneuve urethrotomes, Thompson's divulsor, and other ingenious contrivances, he decides in favor of Syme's operation (external urethrotomy) in old and neglected cases. His experience has been that an incision through the perineum, in the mesial line, just in front of the prostate gland, is less harmful than the cut usually made in the lateral operation for stone in the bladder. Dr. D. W. Hammond relates an extraordinary case of a boy, aged five years, who had been twice operated upon for stone in the bladder within a few months. The first stone weighed only thirty-two grains, the second eighty-five grains; both were of the oxalate of lime variety. Another article of interest to surgeons, reports the successful transplantation of a rabbit's conjunctiva to the human eye for the relief of symblepharon. The operation was performed by Dr. A. W. Calhoun, of Atlanta, who also reports ninety-six cataract operations, with only six failures—from iritis, irido-cyclitis, and corneal troubles, of course. Dr. J. G. Westmoreland, of Atlanta, in the course of a valuable paper on the germ-theory of disease ("Progress in Medicine," pp. 78–86), claims for Dr. Salisbury, an American investigator, the origination of that theory.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 16, 1878.

DR. S. S. PURPLE, PRESIDENT, IN THE CHAIR.

ON INJURIES OF THE WRIST-JOINT, PARTICULARLY COLLES' FRACTURE—WITH DEMONSTRATIONS.

DR. LEWIS S. PILCHER, of Brooklyn, upon invitation, read a paper upon the above subject, in which he brought forward a new explanation of the manner in which forces operate in the production of the fracture at the lower extremity of the radius, commonly known as Colles' fracture.

The theory usually adduced in explanation of the injury was that the radius, being caught between two counter-forces, gave way at the weakest point, about one-half inch from its lower extremity.

Dr. Pilcher, however, thought that the facts of the case did not sustain that theory. For, in the first place, the force of the impact was, in a great measure, broken before it reached the radius. In the second place, the lower end of the radius was specially fitted for receiving and breaking shock, when applied to the extremity in the direction of the long axis of the bone.

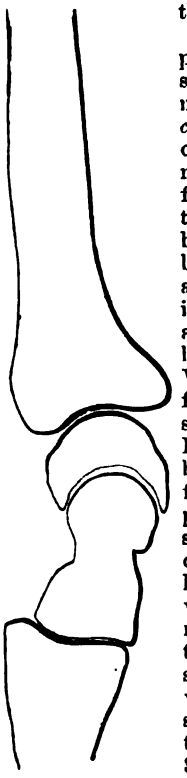


FIG. 1.

The first effect of a fall upon the palm of the hand was forced extension of the hand, and that movement was performed mainly at the *carpo-radial articulation*. Dr. Pilcher then exhibited a longitudinal section through the wrist-joint from the middle of the radius to the middle of the third metacarpal bone. (See Fig. 1.) The motion being mainly at the carporadial articulation, the bones were placed in the relation of two levers, A and B, which were held together by bands, C and D. (See Fig. 2.) When B was carried backwards forcibly—that is, forcible extension of the hand made—the band D was made tense. The opposite border of the lever having slipped forward as far as the band C would permit, abutted against the lower surface of A, which became a fulcrum for the farther action of the lever. If then the backward force was continued, either the band D must rupture or the lever be fractured. The band continuing to sustain the strain, the lever gave way and fracture occurred necessarily just above that portion controlled by the hand. (See Fig. 3.) The strain upon the lever was nearly transverse to its long axis, and it was by that direction that the line of fracture was determined. A fracture had been produced by definite forces, at a definite point, and in a definite direction. Such was believed to be the exact condition present in the production of

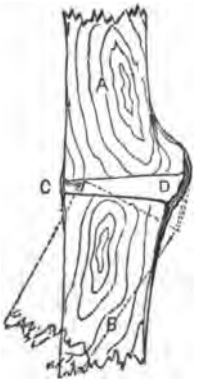


FIG. 2.

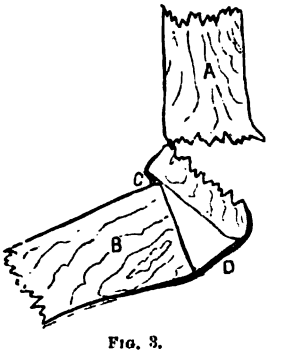


FIG. 3.

Colles' fracture. The combination of conditions was such as to make the bone weaker than the ligament, the very arrangement of its expanded extremity rendered it less able to resist a force of avulsion, and fracture accordingly took place. Dr. Pilcher then demonstrated his theory upon a hand and forearm removed from the cadaver. The hand was held

firmly upon the table and the forearm bent strongly backward until the structures gave way. Dissection was at once made, and it was found that the expected transverse fracture had not been produced, but a fracture had occurred. Several specimens were exhibited in which transverse fracture at the lower end of the radius within three-fourths of an inch of its extremity had been produced by precisely the same manipulation.

A SECOND FORCE.

In all the cases which presented the ordinary appearances of Colles' fracture, a second force other than that of extension was present, and was an important factor in the production of the forward and downward impulse of the radius, namely, a force compounded of the weight of the body and the velocity of the fall which had been sustained. That force was first received upon the anterior ligament and converted by it into a force of avulsion. If it was entirely expended there, sprain, or a sprain with transverse fissure of the radius, resulted. That force was imitated by striking with a mallet upon the sawn extremity of the humerus still articulated with the bones of the forearm. The experiment was not altogether successful, but in specimens produced in the same manner were exhibited the conditions which obtained in the more severe forms of this injury. A new point of motion was established, and the lower fragment of the radius virtually became a part of the carpus; the upper fragment driven downward and forward was entangled in the lower near its palmar margin. (See Fig. 5.)

DORSAL PERIOSTEAL PSEUDO-LIGAMENT.

Examination of the periosteum, reinforced by aponeurotic fibres, showed that it was not torn through, but simply stripped up from the back of the upper fragment according to the amount of displacement of the lower fragment (See Fig. 4).

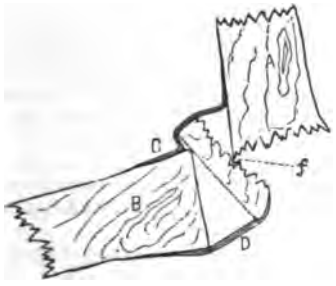


FIG. 4.

The recognition of that band, firmly grasping the lower fragment, Dr. Pilcher regarded as very important, for he regarded it as the key which unlocked the chief difficulties that surrounded the injury. In it rested the explanation of the absence of crepitus and the immobility so characteristic of Colles' fracture. The explanation of the tendency to immediate return of the deformity, the powerful extension necessary for reduction, and the great difficulty in retention mentioned by Cooper and Colles, were by its recognition explained. The theory of penetration, impaction, deformity from muscular action, and the power of an ulnar styloid process could all be explained by the agency of this untorn periosteal aponeurosis. The force having expended itself, entirely new forces began to operate, and finally the condition represented in Fig. 5 was produced.

Powerful extension and *strong direct pressure* were necessary in order to bring the lower fragment into place.

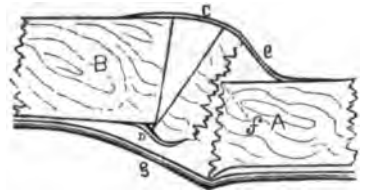


FIG. 5.—*e*, Dorsal periosteal pseudo-ligament. *f*, Point of entanglement. *g*, Flexor tendons.

RELATION OF THE ULNA TO THE RADIUS IN COLLES' FRACTURE.

The point of special interest in that portion of the paper was the explanation of the immobility of the ulna while the lower radial fragment remained unreduced. The chief cause of the phenomena was a strong OBLIQUE FASCICULUS OF THE ANTERIOR LIGAMENT, which extended from the cuneiform bone to the anterior border of the styloid process of the ulna. By the backward displacement of the carpus and the attached radial fragment, that fasciculus was put upon the stretch, limiting all rotation until relaxed. The action of this fasciculus was shown upon specimens.

To the casual glance there was apparent

DISLOCATION OF THE TENDON OF THE EXTENSOR CARPI ULNARIS,

but closer scrutiny showed that it was in its proper sheath and in its proper relation to the ulna. In concluding a description of the peculiar lesions presented by fracture of the radius near the wrist-joint, Dr. Pilcher directed special attention—

1. To the important relations which the untorn aponeurotic dorsal periosteal strip, and
2. The relations and actions which the inner oblique fasciculus of the anterior ligament, sustained to the peculiar symptoms presented by this injury. Those relations, hitherto, had not been described.

REDUCTION OF THE FRACTURE.

Reduction of the fracture was effected by simply bending the hand and wrist backward, making slight extension in the line of the forearm, and making moderate pressure upon the dorsum of the lower fragment.

TREATMENT.

The fracture was both preceded and followed by a severe sprain. The sum of the injuries presented a sprain of the most aggravated description. The fracture never entailed permanent disability.

The sprain was first, both in order of time and importance, in its demands upon the attention of the surgeon.

After the reduction of the fracture, every support necessary for its satisfactory retention was afforded by the structures which surrounded it, with the simple addition of an adhesive strap snugly encircling the wrist so as to firmly grasp the injured structures.

No splint of any kind was useful in the treatment of this fracture.

Dislocation of the ulna, more or less complete, did not alter the indications for treatment, nor demand any material modification of the method to be employed.

Reference was made to forty-nine cases of Colles' fracture and forty cases of severe sprain of the wrist,

which had been successfully treated in accordance with the principles enunciated in the paper.

The paper being before the Academy for discussion,

Dr. Frank H. Hamilton remarked that he had listened to Dr. Pilcher's argument and witnessed his demonstration with the most profound interest. He was proud to know that it was an American surgeon who had made the observations, and felt highly honored that the New York Academy of Medicine was among the first medical societies to which those observations had been unfolded. Among the earliest writers upon the subject was Colles, yet Colles never made a dissection of a case of this fracture. As a consequence, he had entirely displaced the seat of fracture. The observations which had been made, from the time that Colles wrote down to the present, had, almost without exception, been upon old cases and museum specimens. Dr. Moore, of Rochester, had, somewhat recently, made two or four dissections which had brought to light a peculiar observation—namely, that in cases of Colles' fracture the tendon of the extensor carpi ulnaris was dislocated and the styloid process found entangled in the annular ligament. There was no doubt but that Dr. Moore saw just what he said he saw, but the inference which he made that such was the condition in typical cases of Colles' fracture, Dr. Hamilton believed to be incorrect. In order that our observations might be valuable, a certain class of cases, which had incidentally been described as cases of Colles' fracture, must be excluded; that is, those cases in which the person fell from a great height and died within a day or two because of the injury then received. Such cases should not be regarded as typical examples of Colles' fracture. For what might occur under such circumstances it was difficult to say. There might be a comminution of the bones and a general laceration of all the soft parts surrounding the joint. Nor were we to regard *fissure* of the lower end of the radius, so well described by Bigelow, of Boston, as an example of Colles' fracture. The typical fracture at the lower end of the radius, commonly known by the name of Colles' fracture, was the result of slight falls, such as slipping upon the sidewalk, etc., and as the person put out the hand to save himself he received a fracture, almost always transverse, and situated within one-half or three-fourths of an inch of the lower extremity of the bone. The fact that fracture of the radius at its lower end could be produced in the manner demonstrated by Dr. Pilcher, had been recognized by Bouchet, Nélaton, and Voillemier, but they had stopped at the making of the observation in connection with efforts at producing dislocation. Malgaigne had made the remark that *perhaps* the fracture occurred in this manner oftener than was supposed, but it had remained for Dr. Pilcher to *demonstrate* that it *did occur* oftener than we supposed. Dr. Hamilton, in conjunction with Dr. Stephen Smith, had performed the same experiments made by Dr. Pilcher, with the variation that the elbow was placed upon the table and the hand forcibly extended. In that manner a much less force was required to produce the fracture than seemed necessary when the hand was strapped down and the forearm forcibly bent upon it.

Dr. Hamilton regarded the oblique fasciculus of the anterior ligament as a very important anatomical element, and proposed for it the name of Pilcher's ligament, inasmuch as Dr. Pilcher was the first to demonstrate its importance.

It was important because it explained the peculiar disposition of the lower fragments.

The third point of importance in Dr. Pilcher's paper was the demonstration that in a *certain proportion of cases*, when this fracture was produced, the periosteum posteriorly was elevated, but not torn across so as to leave the fragment free.

If attempt, therefore, was made to reduce the fracture without manipulation, resistance was offered by that tense periosteal strip, strengthened as it was by aponeurotic fibres, and reduction might be impossible.

Dr. Hamilton was not willing to say that he should never use splints in the treatment of this fracture, notwithstanding the absence of marked tendency to displacement after the fragment had been properly reduced.

He thought there was some danger in teaching that doctrine. But the important fact was that reliance should not be placed upon any particular form of splint. The main point was whether or not the fracture was reduced. If properly reduced, the splint should be soft and comfortable, and should be bound on only with very moderate tightness. It was not necessary that the splint should be curved, and pressure should *never* be made in any form in front of the lower fragment. It was possible that the splint could be dispensed with at the end of two weeks: at all events, it should be removed at the end of one week and free passive motion made.

Dr. A. C. Post suggested that the fracture should be called Pilcher's fracture instead of Colles' fracture, because Colles made such a grave mistake with reference to the seat of fracture in this particular class of cases, and Dr. Pilcher had demonstrated its occurrence with such satisfaction. Dr. Post directed attention to one feature of the deformity in cases of the "silver-fork" fracture, or Pilcher's fracture, and it was that the *entire hand* was carried to the radial side, thus giving unusual prominence to the lower portion of the ulna. With reference to treatment, the most important point was to make early and thorough reduction. For the most part, that could be readily accomplished by means of extension combined with manipulation. He did not agree with Dr. Pilcher with reference to the inexpediency of using splints, but believed it to be important to support the limb so as to secure good position and perfect rest. At the same time, he believed that the apparatus, whatever it might be, that was employed, should be frequently removed, and bathing, friction, and passive motion applied.

Dr. Weisse presented a specimen illustrating the fracture described by Barton, and known as Barton's fracture.

Dr. Willard Parker remarked that he had listened with profound interest, and had been very much instructed by Dr. Pilcher's paper and his demonstration. He, however, was not yet ready to accept the view entertained by Dr. Pilcher, that these cases could be safely left to themselves after complete reduction had been effected. He believed that something more in the way of treatment was necessary than had been recommended. In olden times he used to teach that there were *three* indications to be fulfilled: 1. To put the parts in place; 2. To retain them in place; and 3. To guard against inflammation. The first implied complete, early, and thorough reduction of the fracture. The second implied the use of some form of retentive apparatus. The third, the use of such measures as each case might demand. Dr. Parker believed in resorting early to passive motion.

Dr. Satterthwaite contributed to the surgical pathology of the fracture under consideration by giving an analysis of twelve specimens, which he had examined in the New York Hospital Museum.

There were nine instances of *transverse* fracture. There were eight instances of *comminuted* fracture, the number of pieces varying from three to six. There were five cases of *fissure* of the radius. There were three cases of *impacted* fracture.

The conclusion reached from the analysis was: 1. That in a majority of these cases the fracture was *transverse*, and occurred within half an inch, often within three-eighths of an inch, of the articular surface of the radius; and 2. That *comminuted* fracture was of nearly as frequent occurrence as the transverse.

With reference to dislocation of the tendon of the extensor carpi ulnaris, Dr. Satterthwaite had had an opportunity of making one post-mortem in which dislocation of the tendon was present. In reply to a question by Dr. Hamilton, Dr. Satterthwaite stated that the patient died in consequence of other injuries produced by the accident. Dr. Satterthwaite, however, was quite positive that he had seen several cases in which dislocation of the tendon was present during life and was diagnosticated, and yet the fracture had not been produced by unusual violence. With reference to cases of impaction, of which there were three in the twelve specimens examined, he thought the proper method of treatment was to employ an anæsthetic, separate the parts, and then reduce the fracture. Having effected reduction, almost any splint might be employed, but his preference was for the antero-posterior splint. He then stated that, without being willing to deny that a large number of fractures at the wrist-joint might be produced in the way that Dr. Pilcher described, calling, in such cases, for very simple treatment, still the lesson of the specimens at the N. Y. Hospital taught that other conditions in certain cases might also be present, and that we should have the possibility of their occurrence in mind when we are called upon to treat such fractures. He therefore very naturally regarded some form of retentive apparatus as a very important item in treatment.

Dr. Pilcher, in closing the discussion, remarked that he did not wish to be understood as claiming any originality in the production of the fracture by forcible extension, but the *particular manner* in which the force operated to produce it, the *rationale* of the production of the injury, he had not found explained by any authors whose writings he had ever had the opportunity of reading. He thought the prevalent impression was that the bone was caught between two forces and yielded at the weakest point.

With reference to impaction he could conceive that it was of frequent occurrence in cases in which the violence was extreme, and he also believed it to be a legitimate conclusion that a preponderance of such specimens was found in hospital museums. The cases of severe injury, such as those in which comminution was likely to be present, very commonly found their way into hospitals.

Deaths from Starvation and Want in England.—A return has been made to Parliament of all cases upon which, during the year 1877, a coroner's jury returned a verdict of death by starvation or death accelerated by privation. From this we learn that there were seventy-one such deaths within the year, of which twenty-two were children of two years of age and under. Of the remaining thirty-seven cases, one was ninety years of age, and twelve others were sixty or more. In comparatively few cases was want or privation the sole or chief cause of death, these being generally mentioned (except in the case of infants) as tending to cause the fatal termination of disease.

Correspondence.

A PRACTICAL SUGGESTION.

HOW TO MAKE "CRINOLINE" BANDAGES.

To the Editor of The Medical Record.

Sir:—The "plaster-of-Paris" or Pirogoff's bandage has lately become, through the great and beneficent advance in the treatment of "Pott's disease of the spine," one of the most important items in the *armamentarium* of the surgeon. It seems to be settled that "cross-bar wiggin" or "crinoline" is, on the whole, best fitted for this bandage. If there is any question, it is between this and similarly woven fabrics which all present an objection, viz.: that it is impossible to tear them into strips. So far as I know, these materials have been rendered available for use by cutting with scissors. This is a very tedious and laborious process, as any one can easily ascertain by trying to make a single long bandage in this way. I have contrived a manner of obviating this difficulty, which has been found so very satisfactory in practice, that I venture to offer it to the notice of your readers. I have been very long in the habit of using long bandages of "pure rubber," have lately offered to the profession two papers on that method of practice,* and am very happy to be frequently informed of its very wide acceptance and success. These bandages have to be cut with great smoothness and exactness, for on this perfectly even cutting depends their utility and durability. The rubber bandages are cut by rolling a long sheet of pure rubber over a cylinder or "drum." To this, while revolving with great rapidity, a perfectly keen knife (kept constantly wet) is applied, and in this way the work is very admirably accomplished.

While trying to make a lot of bandages from a piece of crinoline, it occurred to me that, possibly, in a similar way, this refractory fabric might be managed. I doubled about one inch of an end of the piece, tacked this doubled portion to a common curtain roller (about forty inches in length), placing the tacks just one inch apart. The cloth was then snugly and evenly rolled around the wooden cylinder. The position of the tacks was easily indicated by pencil marks on the outside of the roll. The object of making such marks being to avoid injury to the tool used afterwards. Around the roll were placed, at intervals of two or three inches from each other, according to the width of the required bandages, moderately strong rubber bands, such as are in common use for filing letters, etc. The whole was now ready for experiment, and was carried to the shop of a turner in the neighborhood, who was asked to mount it on his lathe and, if possible, cut the cloth into bandages of a proper width. The turner ridiculed the idea, and said that the cloth would simply be torn into rags. On my representing to him, however, that in that event a slight pecuniary loss to myself would be the extent of damage incurred, he placed my roll on the lathe. The rapid revolution of the curtain rollers in a few seconds tightened the roll of cloth so that it became almost as hard as wood. The tool, a keen thin knife, was applied in the usual way, and to the great surprise of the turner and my own satisfaction, the crinoline was,

* "On Surgical Uses, other than Hæmostatic, of the Strong Elastic Bandage," in Transactions of the American Medical Association for 1877. Published also in pamphlet form by James Campbell, Boston. Paper on same subject in Chicago Medical Journal and Examiner for November, 1877.

in a very few minutes, converted into some fifteen or sixteen bandages of various widths, twenty-four yards in length and of the most perfect symmetry. I have used several of the bandages in practice, and find them in every way all that can be desired. Nothing can be easier than this way of cutting bandages, and there is no reason why they should not be sold at a price very little beyond that of the uncut cloth. Any turner would be glad to cut a single roll for twenty-five cents, and, doubtless, if a number of rolls were to be cut, for considerably less. My directions were to cut down *to* the wood, so that the surgeon has nothing to do but to saw off each roll of bandage as he wants it. These single bandages, each with its wooden core, can be most easily unrolled into either of the little machines contrived for "filling" the meshes of the cloth with plaster-of-Paris.

I hope that I have given a clear idea of my contrivance. If I have not, I am in fault, for nothing can possibly be easier or more simple. When Mawworm (in "The Hypocrite") made his famous sermon, he warned his hearers that, on the last day, they would be disappointed in their expectation of getting to heaven by hanging to his coat-tails, for on that day he proposed to wear a "spencer." I have no hope of reaching the dubious beatitudes of professional fame by attaching myself, in any way, to "Sayre's jacket." With no such hope do I send you these hastily written lines, but with a single and sincere desire that a suggestion, the practicability and usefulness of which I have fully verified, may be adopted, and so make a most admirable surgical apparatus somewhat more easy of application. HENRY A. MARTIN, M.D.

27 DUDLEY ST., BOSTON, July 4, 1878.

P. S.—In looking over the MS. I find that I have not explained the use of the rubber rings placed around the roll of crinoline. They serve, perfectly, to keep each bandage, as it is cut, from unrolling or becoming loose. I mentioned the contrivance described above to Messrs. Codman & Shurtleff, and they have since sent me two or three bandages made according to my directions. They are even neater and more perfect than those made for myself. I have no doubt that any physician, who chooses to take the trouble, can get them made as perfectly at any well-appointed turner's shop. H. A. M.

New Instruments.

DISCOTOME.

By B. A. WATSON, M.D.,

SURGEON TO JERSEY CITY CHARITY AND ST. FRANCIS' HOSPITALS, JERSEY CITY, N. J.

IT frequently happens that surgeons are consulted in regard to the removal of granules of gunpowder, even months after the occurrence of the accident which gave rise to the defacement.

Heretofore, where the powder-granules were thickly imbedded, the desired object has been satisfactorily attained by dissecting up the integument, removing the granules and then replacing the flaps; but I am not aware that any plan has been previously suggested for the removal of the granules that are often found widely scattered over the face. About one year ago I was consulted in a case of this kind, and then designed the instrument shown in the following woodcut, which I have designated a discotome.

a. Handle; b. Screw; c. Guard; d. Circular cutting-edge.

At my request, Messrs. F. G. Otto & Sons, of New York, made this instrument for me, and its use in my hands has been very satisfactory. It is prepared for use by adjusting the guard by the aid of the screw, so that the cut made may be of the required depth. This having been done, the circular cutting-edge is placed on the integument so as to encircle the granule of powder, and while slight pressure is maintained, the instrument is turned first to the right and then to the left. By this motion the integument is incised through its entire thickness; and now by the aid of a small tenaculum, made *especially* for this operation, the little disk thus cut is raised from its bed and the few connecting fibres at its base are separated by a scalpel or scissors. The diameter of the disk is about one line, so small that in healthy integument every trace of the operation will speedily disappear.

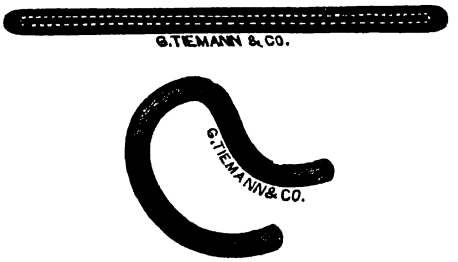
The following advantages are gained by the use of this instrument: 1st. The removal of scattered granules. 2d. This removal is effected with the least possible loss of tissue. 3d. The operation is easily, neatly, and quickly performed. 4th. No dressing is required, save possibly an occasional application of cold water.

A MODIFICATION OF HODGE'S OPEN LEVER PESSARY.

By JNO. S. COLEMAN, M.D.,

AUGUSTA, GA.

THE difficulties encountered in a change of form of Hodge's open lever pessary, and, sometimes, in its removal from the vagina (it being impossible to maintain a hold upon the smooth, hard rubber) induced me to attempt a modification of the material used in its construction, that would obviate these troubles. The pessary has been made for me by Messrs. Tiemann & Co., of New York, of copper wire and soft rubber.



This can be bent into any desired shape; the terminal end of each horn being of soft material, it does not impinge painfully upon the anterior wall of the vagina. It can be introduced as a closed lever, and the horns afterwards separated.

The soft rubber can be readily grasped, and the instrument removed according to Dr. Hodge's direc-

tions, or, the horns compressed, and then its removal is as easy as is the case with Dr. Albert Smith's pessary.

The open lever answers an indication fulfilled by no other form of pessary, *i. e.*, where the urethra is so sensitive that the slightest pressure upon it is intolerable.

My experience with this modification is, as yet, limited to three cases, but in them it was used with great satisfaction to myself and comfort to my patients.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 14 to July 20, 1878.

BAILY, J. C., Major and Surgeon. When relieved, to return to his station, Presidio of San Francisco, Cal. S. O. 97, Div. of the Pacific and Dept. of California, July 1, 1878.

HUBBARD, V. B., Capt. and Asst. Surgeon. To report to Major Sanford, 1st Cav'y, for field duty with his command, relieving Surgeon J. C. Baily. S. O. 97, C. S., Div. Pacific and Dept. Cal.

AINSWORTH, F. C., 1st Lieut. and Asst. Surgeon. Assigned to duty with Battalion 8th Inf'y, ordered to duty in the field. S. O. 97, Div. of the Pacific and Dept. of California, July 1, 1878.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.—Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 20, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.
July 13, 1878....	0	8	44	4	20	31	0
July 20, 1878....	0	8	51	1	9	19	0

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE, WASHINGTON, D. C., July 13, 1878.

NATIONAL QUARANTINE REPORT.—The following information is furnished by the Surgeon-General of the Marine Hospital Service to State and municipal officers of health, etc., in accordance with the requirements of the National Quarantine Act:

Havana.—From twenty-six to thirty-four deaths from yellow fever, and more from small-pox, are now occurring weekly in the city of Havana.

Cardenas and *Sagua.*—Good health reported in bay and city.

Matanzas.—The captain and four of the crew of the bark Marie Donau were attacked with yellow fever on the 3d instant, in the harbor of Matanzas. Only one other case of fever has occurred in the shipping of that port. Sporadic cases are reported in the city, but the disease is of a mild character.

Key West.—Two cases of yellow fever have occurred in the harbor of Key West: one on the Norwegian ship Maria Frederika, and one on the Spanish bark Doña Talvafora. The city is reported healthy.

Two of the British vessels, which recently conveyed native Indian troops to Malta, had cholera on board during the passage from India. On one of the vessels nine cases and four deaths, and on the other, two deaths, occurred before the vessel passed the Suez Canal. The vessels were allowed to pass the canal without detention, though it is customary to send a vessel, on which a single case of cholera has occurred during the passage, back to Thor, 120 miles, there to remain two weeks or more in quarantine.—JNO. M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

HOW TO SAVE INFANTS.—The Board of Health has issued the following circular in relation to the care and feeding of infants during the hot weather:

In nursing, over-feeding does more harm than anything else; nurse an infant a month or two old every two or three hours. Nurse an infant of six months and over five times in twenty-four hours, and no more. If an infant is thirsty, give it pure water, or barley-water, no sugar. On the hottest days, a few drops of whisky may be added to either water or food, the whisky not to exceed a teaspoonful in 24 hours.

If the infant must be fed, boil a teaspoonful of powdered barley (ground in a coffee-grinder) and a gill of water, with a little salt, for fifteen minutes, strain, then mix it with half as much boiled milk, add a lump of white sugar, size of a walnut, and give it lukewarm from a nursing-bottle; keep bottle and mouth-piece in a bowl of water when not in use, to which a little soda may be added. For infants five or six months old, give half barley-water and half boiled milk, with salt and a lump of sugar. For older infants, give more milk than barley-water. For infants very costive, give oat-meal instead of barley. Cook and strain as before. When your breast-milk is only half enough, change off between breast-milk and this prepared food. In hot weather, if blue litmus-paper, applied to the food, turns red, the food is too acid, and you must make a fresh mess, or add a small pinch of baking-soda. Infants of six months may have beef-tea or beef-soup once a day, by itself, or mixed with other food; and when ten or twelve months old, a crust of bread and a piece of rare beef to suck. No child under two years ought to eat at your table. Give no candies—in fact, nothing that is not contained in these rules, without a doctor's orders.

Summer complaint comes from over-feeding and hot and foul air. Keep doors and windows open. Wash your well children with cold water twice a day, and oftener in the hot season. Never neglect looseness of the bowels in an infant; consult the family or dispensary physician at once, and he will give you rules about what it should take and how it should be nursed. Keep your rooms as cool as possible, have them well ventilated, and do not allow any bad smell to come from sinks, privies, garbage-boxes, or gutters about the house where you live. See that your own apartments are right, and complain to the Board of Health, No. 301 Mott Street, if the neighborhood is offensive. Where an infant is cross and irritable in the hot weather, a trip on the water will do it a great deal of good (ferry-boat or excursion-boat), and may prevent cholera infantum.

NEW YORK FREE DISPENSARY FOR SICK CHILDREN.—The sixth annual report of the New York Free Dispensary for Sick Children, 217 East Forty-seventh Street, shows a creditable record, and evinces the value that may be given to an unpretentious institution having a real function in society, and fulfilling it instead of amusing the public with high-sounding

reports. A glance at the contents exhibits the fact that the institution has treated a grand total of 3,300 patients. Of these, 118 furnished surgical cases of some importance; 65 had diseases of the organs of circulation; of respiration, 1,122; of digestion, 1,069; of the nervous system, 73; of the skin, 246; eye and ear, 62; genito-urinary organs, 26; contagious diseases, 57; unclassified, 238. The number of vaccinations performed has been 92, and 132 patients have been visited at their homes; visits by district physicians, 248; prescriptions dispensed, 6,513. Saving the visits to sick children at their homes during the heat of the summer, for which purpose physycians had to be appointed and paid, the report of Dr. John C. Jay, the Treasurer, records disbursements only to the insignificant amount of $1,655.63—a very creditable showing certainly in these days of frequent extravagance or worse in charitable institutions. The dispensary that can report such work as this at an expenditure so trifling, certainly vindicates its reason for being.

In other particulars the report conveys no noticeable lessons in medical science. The absence of pyæmia, erysipelas, and other forms of hospitalism, evidences the excellent sanitary administration of an institution that is not yet haunted by the bacterial spectre, and accounts for the low death-rate, considering the fact that 38 died of confessedly incurable diseases, leaving a balance of only 57 out of 623 dying of diseases not necessarily driving on to a fatal termination. The number of operations performed in the hospital was 37, none of them of mentionable gravity.

Treatment of Transverse Fracture of the Patella.—Mr. Callender, of St. Bartholomew's Hospital, London, employs a very simple apparatus for transverse fracture of the patella. It consists essentially of a canvas slipper and of a sheet of plaster, fitted to the thigh and extending to the upper margin of the patella with loops on either side of that bone; the extension is made from the loops of plaster, the slipper serving as the point of counter-extension. By means of pulleys, the two fragments of the broken bone can be brought together, usually without difficulty. The patients are allowed to walk around with the apparatus on. The results obtained by its use have been very satisfactory.—*Medical Times and Gazette.*

Treatment of Whooping-Cough.—The following formula is recommended by M. Dervieux in the treatment of a commencing pertussis:

℞. Extract of aconite.....gr. ¼
Cherry laurel water.....ʒ i.
Syrup of ipecac.....℥ xlv.
Mucilage.....ʒ vi.
M.

This is given as soon as the characteristic cough presents itself, in doses of a teaspoonful every hour to young infants, two teaspoonfuls to children over three years of age, and a tablespoonful to adults.—*Hospital Gazette*, etc.

Action of Parenchymatous Injections of Glacial Acetic Acid on Carcinoma.—Dr. Gies injected diluted, glacial, acetic acid (1 : 3 aq. destil.) into a recurrent carcinoma, as large as a hen's egg, seated in the right side of the inferior maxilla; the injection excited suppuration, and the tumor was diminished to the size of a hazel-nut. A primary carcinoma, as large as a hen's egg, situated beneath the ear of the same patient, was treated in the same way, and after 21 days had almost entirely disappeared; 25 syringefuls were injected before this tumor suppurated. A carcinoma as large as a hen's egg, situated in the left breast of a woman, suppurated after 10 injections, and in the course of a month had shrunken to a nodule about the size of a hazel-nut.—*Centralblatt f. Chir.*, No. 19.

The London Small-Pox Epidemic.—It is now little short of two years since the present epidemic of small-pox in London commenced, and the 56 fatal cases registered in the week ending May 11th raise the total of deaths from this disease, since the end of June, 1876, to 4,174. There has of late been a slight decline in the number of new cases and deaths reported weekly, but not enough to indicate a decided abatement of the epidemic. The proportion of unvaccinated persons dying from the disease is very large. One of the most remarkable features of the present epidemic is the comparative immunity from the disease, which the rest of England is enjoying at the present time. During the first three months of the present year, 716 deaths from small-pox were registered in England and Wales, of which no less than 627 occurred in London and its outer ring of suburban districts, and 44 in Harwich, Gravesend, Tunbridge, and Hitchin, while in all the rest of England and Wales only 45 fatal cases were registered.

Turpentine as an External Application in Small-Pox.— Dr. Farr, of Lambeth, ascribes great value to turpentine as an external application in small-pox. He claims that it at once relieves any smarting or irritation, effectually corrects the unpleasant odor given off in the more confluent form of the disease, and seems in a marked degree to arrest pustulation, thereby modifying and sometimes entirely preventing pitting. In consequence of its powerful antiseptic and disinfectant properties, it tends, moreover, to prevent the spread of the infection. Mr. Farr uses it in the proportion of one part of rectified spirits of turpentine to three or four of olive oil, and applies it night and morning by means of a feather.—*The Lancet*, May 11th.

Prof. Karl Rokitansky.—The death of Prof. Rokitansky is announced by telegraph from Vienna. He was born at Königgratz, in Bohemia, on February 20th, 1804, studied medicine in Prague and Vienna, and received the degree of Doctor in 1828. He was subsequently attached to the Institute of Pathological Anatomy in Vienna, and was afterwards appointed Demonstrator in the School of Chemistry. In 1841 he was made Honorary Director of the University of Prague, and Member of the Academy of Sciences of Vienna. In 1849 he was named Dean of the Professors of the School of Medicine, and in 1850 Rector of the University of Vienna. He was esteemed in Germany as the chief of the Viennese school of pathology. His principal work—A Manual of Pathological Anatomy—was published in Vienna in 1842. Three years later it was translated into English by the Sydenham Society, and published in London. A grand celebration of Rokitansky's seventieth birthday was held, in the hall of the Academy of Sciences, in Vienna, on February 20, 1874.

Prof. Bartels, of Kiel, died on the 20th of June. A notice of his life will be given in a subsequent number.

There are no yellow fever cases in the city.

Original Lectures.

LOCALIZED PERITONITIS—PROLONGED JAUNDICE—RENAL AND CARDIAC DISEASE.

A Clinical Lecture delivered at the College of Physicians and Surgeons, New York City.

By ALONZO CLARK, M.D.,

Professor of Pathology and Practical Medicine.

(Reported for The Medical Record.)

LOCAL PERITONITIS—ADHESIONS OF THE BOWELS—CONSTIPATION—COLIC.

Gentlemen:—This boy is twelve years old. Somewhat over one year ago he was hit in the abdomen by a snow-ball. The ball struck him just above the umbilicus and a little to the right of the median line. His mother says that in consequence of the injury thus received he was sick in bed, and that the physician who attended him thought he had peritonitis. At the same time it appears from the history that, although he suffered considerably from pain and had some fever, his bowels were readily acted upon by medicine. We should hardly expect that a blow from a snow-ball would give rise to peritonitis. It seems, however, that it was the opinion of the physician that it did. But a movement of the bowels would hardly occur if it had been *general* peritonitis. Inflammation of the peritoneum produced by violence or cutting, as in surgical operations, stab-wounds and bullet-wounds, is very apt to be local, and the same thing may be true of local injuries received upon the surface of the abdomen. It is possible, therefore, that this local external injury may have produced a local peritonitis. With reference to *general peritonitis*, it would be pretty safe to say that it did not exist, for the bowels were easily acted upon by medicine. Indeed, in general peritonitis, except in the puerperal form, cathartics have no effect whatever in the way of producing evacuation from the bowels. I am in the habit of saying, in my regular lectures upon general peritonitis, that cathartics administered under those circumstances will produce no more effect than if poured into a gun-barrel.

The mother also says that the boy vomited a small quantity of greenish material soon after he was taken sick. That would not be a diagnostic mark, but it renders it more probable that he had peritonitis to some extent.

The bowels were "swollen," we also learn—probably tympanitic—and this is another symptom of peritonitis. The sickness, then, which this boy had at that time, was probably a local peritonitis.

The mother says that, since recovering from his first sickness, he has had "several attacks of the *cramps*." He was nauseated when the first cramp or spasm came on, but vomiting did not occur, nor did the bowels become "swollen." The "cramps" have recurred at intervals varying from four to six weeks. When they occur the boy takes to his bed, the mother applies a mustard paste over the abdomen, gives him a dose of laxative medicine—usually senna and manna—and evacuation from the bowels is produced, relief follows to a certain extent, and at the end of about two days he is again up and about. Constipation is usually present before he has an "attack of the cramps." On physical examination of the abdomen there is evidently greater resistance to pressure upon the right than upon the left side. There is nothing like a tumor or lump, but there is simply a little greater thickness of the walls of the abdomen. The percussion note is nearly the same upon both sides, which implies that the resistance to pressure is not made by fæcal matter.

It is altogether probable that this boy a little more than a year ago had a local peritonitis, which resulted in adhesion of the bowels to one another, and to the walls of the abdomen through the region in which the inflammation existed, and that the adhesion of the intestine rendered him liable to attacks of colicky pain, which the mother calls cramps. When fæcal matter reaches this portion of the intestinal canal, it is to a certain extent obstructed, and unless the accumulation above is sufficient to push the material onward, it may remain there and provoke pain. I doubt whether, during these latter attacks, the fever is very high, and the fact that they are relieved by a movement from the bowels is pretty good evidence that they are colicky in character.

The idea of the mother is that each attack is a new occurrence of the inflammation; but this view is hardly tenable, while the view which we have taken is rational, if we assume that the inflammation produced adhesion of the bowels.

There is then probably an imprisonment of the intestine at the point where the injury was received. For that, of course, there is no remedy but time; there is nothing else which will liberate the intestine. But we can save him from pain by the agency of laxative medicine taken every day, so as to move the fæcal matters onward by stimulating the peristaltic action of the intestinal tube. The peristaltic action of the tube can be stimulated in the imprisoned portion as well as elsewhere.

For that purpose, therefore, I would recommend that the rhubarb and aloes, or comp. rhubarb pill be taken in such quantities as will give a pretty free movement from the bowels every day. With this condition there is a tendency to constipation, and the boy has that tendency. I think that a pill can be so graduated as to effect simply a full movement daily, and in that manner he will probably be relieved from the recurrences of pain.

JAUNDICE OF NEARLY FOUR MONTHS' DURATION—PROBABLE CAUSE—PROGNOSIS.

This man, æt. fifty years, and of temperate habits, has been intensely jaundiced since January 1, 1878. He has not at any time suffered from pain. He is a carpenter by trade. The first thing he noticed was loss of appetite and slight nausea. He has been able to work considerably since his jaundice commenced, but latterly has felt rather weak, and has not been able to perform much manual labor. About five weeks after the beginning of the jaundice, what he calls a diarrhœa appeared, which has continued up to this time. He says that at times he has had as many as six passages from the bowels daily; that they are clay-colored and somewhat consistent.

This can scarcely be called a diarrhœa. It would rather imply either impatience of the rectum in the discharge of any material that comes into it, whether the quantity be large or small, or an obstruction through which only a small quantity of fæcal matter can pass at a time. At all events, the looseness of the bowels of which he complains does not deserve the name of debilitating diarrhœa.

He is drowsy a good deal of the time; the surface of his body is "all of an itch," and his urine stains his underclothes yellow. His skin, as you see, is of an

intensely bright yellow color. As we look at the abdomen it is seen that there is a fulness in the epigastrium; it looks as if there was something solid there. As I place my hand over this region I find that there is something beneath which resists pressure. The lower border of this tumor can be felt three inches below the free border of the ribs upon the left side, and the edge is pretty thick. The extent of hepatic dulness, on a line with the right nipple, is ten inches. There is a slight sulcus on the tumor under the free border of the ribs upon the right side, and a second one can be felt a little farther to the left. With these exceptions the surface is smooth.

We have then a patient in which jaundice appeared as the first symptom and has been constant since it began, in whom the passages from the bowels are clay-colored, who has an enlarged, and, with the exception of two slight depressions, a smooth liver, who has not at any time suffered from pain, and, as far as we can ascertain, who has not been addicted to the use of alcohol as a beverage.

With reference to the cause of these symptoms, I am inclined to the opinion that they are due to obstruction of the common bile-duct. The *ductus communis* can be permanently obstructed in a variety of ways.

One of these ways is by acute inflammation, which takes place in the capsule of Glisson. Again, it may become obstructed in consequence of a chronic process, in which the material which is thrown out is converted into fibrous matter that contracts and gradually constricts the duct.

This man has not had any pain which would lead us to the supposition that inflammatory action has been produced by the passage of gall-stones, an accident that occasionally happens.

I am, therefore, inclined to infer that the duct is obstructed by the contraction of new fibrous tissue, on its outside, just as it emerges from the liver.

If that is the fact, medicine will not do much in the way of affording relief. I would, however, have him take soda rather freely. I think it is a better cholagogue than mercury. It has at least one virtue, and that is the power of keeping the bile in a fluid state, thereby enabling it to pass through an opening which would not permit its escape were it viscid. I should recommend that this man take about ʒss. of carbonate of soda three times a day, and if it can be obtained, it may be taken in a glass of Vichy water, which renders the soda less disagreeable. I do not think that further medication will be of service except the daily use of iron, and the proto-carbonate or the chocolate iron lozenges is as good a preparation as can be employed.

It is one of the characteristics, when the outflow of bile is obstructed, that the liver should grow large and black.

There is a sequel to this history which I did not like to give in the presence of the patient. If our diagnosis is correct, he will go on from bad to worse, and finally die in consequence of exhaustion due to repeated hemorrhages. The hemorrhage is probably due to the fact that the blood-vessels are not properly nourished; they give way, and blood escapes from the mouth or from the bowels, or from some other part of the body. The hemorrhage will be repeated, and in three out of four cases the patient dies of exhaustion incident to its occurrence.

LEAD-POISONING—CARDIAC DISEASE—RENAL DISEASE—"THE TEAR LINE"—QUESTION REGARDING THE SIMULTANEOUS OCCURRENCE OF CHRONIC PHTHISIS AND CHRONIC CARDIAC DISEASES.

Our next patient is a man æt. forty years, and a plumber by occupation. He says that about sixteen years ago he had lead colic twice. There can be seen upon examination at the present time a slight trace of the blue line along the edge of the gums. He continued in his business, and has been able to work some during the past year. He has that peculiar, pale countenance which suggests the existence of Bright's disease. His urine has been examined and found to contain albumen.

His chief complaint is of palpitation of the heart and shortness of breath on going upstairs. He has noticed this especially during the past year. He has had attacks of articular rheumatism, the first occurring four or five years ago. He suffers considerably from headache. He has not at any time had œdema of the feet. He has spit blood within the last week. With the form of kidney disease now suspected, it is not at all uncommon to have no swelling of the feet when the urine passes freely. The best place to examine to determine whether there is any œdematous tendency, is at the inner border of the lower eyelid, just where the mucous membrane appears. The mucous membrane rises up and forms a bright line which looks like a small silver wire. It has sometimes been called "The Tear Line." This is not distinctive of renal diease, but occurs in connection with diseases which give rise to œdema in other parts of the body. It disappears as the eyelid is drawn away from the eye. On examination of the chest, the apex of the heart is found beating at about five inches to the left of the median line and somewhat below the normal situation. There is a murmur, probably valvular, but it is not very distinct. There is probably mitral regurgitation. I would not expect that this man has much pulmonary disease.

Many years ago Rokitansky published the statement that there was an incompatibility between chronic phthisis and considerable disease of the heart. I had just finished reading the paragraph containing the statement, when I was asked to see a lady who had been an invalid for several years. I went and I found that she had advanced consumption and also advanced disease of the heart. I thought that was a rather speaking commentary upon the text I had just read. The two diseases, I think, exist in the same person and at the same time not infrequently; but I can hardly suppose that this man, who has had lead colic and still furnishes evidence of the existence of lead in the system, and has renal disease and cardiac disease, would also have pulmonary disease. A physical examination of the lungs, as you see, gives negative results. While examining the chest I discovered a peculiar, offensive sweetness of the breath, which is present when the system is not free from urea. Yet there is no œdema. His bowels are habitually constipated.

Treatment.—I should say that the best treatment for him would consist in the use of iron and diuretics, notwithstanding the absence of œdema. Iron may be used in almost any form, and perhaps as serviceable a preparation as any is the form contained in the chocolate lozenges just recommended.

It is because of the peculiar sweetness of the breath rather than œdema that I advise the use of diuretics, one of which should be infusion of digitalis, it having more power to cause separation of the salts of the urine than almost any article that can be employed. The salines will produce the watery elements of the urine, while digitalis is more likely to give urea and other substances which would be solid when the watery element is evaporated. As to the heart, it is beating regularly, and, I think, if he were not affected with renal disease, that he would scarcely know that his heart was in any way diseased. There is scarcely

anything to be prescribed for the heart. His food should be of the most nutritious kind, but more vegetable than animal. His urine will be examined for casts, and perhaps we shall know a little more what to do for him at his next visit.

Original Communications.

THE HEART IN TYPHO-MALARIAL FEVER.

By HENRY WORTHINGTON, M.D,

LOS ANGELES, CAL.

THE cardiac variations in all forms of fever are interesting and highly important studies.

But so little has this department been investigated, and so meagre is the literature of the subject, that with the exception of Louis and Stokes, Gerhard and Huss, there is hardly an author with whom I am acquainted who has given anything like the elaborate record which the matter merits.

One would suppose that since Senac and Corvisart, Laënnec, Bouillard, Hope, and many others, have reduced the diagnosis of heart affections to almost a certainty—placing it, in fact, within the circle of exactitude, that there would have been more investigators in this promising field of research.

But, however silent most observers are with regard to the details of abnormalities in fever-hearts, probably all writers on fever are agreed that this organ plays an important part in questions of treatment and prognosis.

Moreover, my observations have convinced me that one of the most, if not the most, reliable guides, among the physical signs of fever, is the heart.

Huss's axiomatic statement, that "as feebleness of the muscular system is an index of the general depression of the vital forces, so the feebleness of the action of the heart, perceived in the alteration of its sounds, becomes the most exact measure which we possess of the general state of depression," is unquestionably applicable to the heart in this typho-malarial disease.

When we say secondary, it is not assumed that this is a specific fever. For the morbific principle is not identical with the typhoid material of the pythogenic disease, but it rests upon a double animal and vegetable base—a combination of septic and malarial elements.

The microscope has not revealed any special or pathognomonic changes in the heart substance in fever.

A parenchymatous degeneration of the muscular tissue is found, shown by flaccidity and softening; but this would not account for the violent disturbances of the heart's functions.

Hoffman's waxy degeneration is too exceptional to be pathognomonic. Nor are the granular changes infrequently noticed sufficient explanation. Nor can the teachings of the anatomical doctrines of Broussais be accepted; for it is not a carditis; there is no evidence of inflammation. It is the secondary effect of the fever-poison.

I do not know that any numerical laws could, at this stage of our knowledge, be laid down, even with the admirable researches of Dr. Woodward and the army tables at hand; so that, as a matter of fact, our conclusions rest upon individual cases.

A class of cases of this typho-malarial disease may be observed having some peculiar characters. When the remissions are not so defined and the fever is more continued, the heart weakens progressively from systole to diastole, from left to right.

This is illustrated by a case transcribed from my note-book:

Jno. Rea, æt. 29, Englishman, began to have morning chill and evening fever every day, from Oct. 30, to Nov. 3, 1876. The fever became continued by the 6th, and on the 8th the temperature at 5 P.M. was 106°. Repeated sponging with ice-water and *aguardiente* reduced the heat to 100¼°. There was no intestinal hemorrhage, nor much tympany, but the tongue was dry and brown, and there was occasional low delirium at night.

On the evening of the 9th I discovered the first sound at apex gone, and the impulses very feeble.

The pulse throughout was soft and quick.

As the fever subsided, and stimulants were freely used, systolic contraction reappeared.

The order of results were: left ventricular debility, depression indicated by feeble impulse, weakened diastole, and a progressive return of power from right to left.

Liebermeister and E. Cyon state that this condition is due to increased temperature; according to Louis, "something the reverse of inflammation." Hertz claims that it is anæmia. Stokes refers it to an adynamic condition. Jaccoud, Trousseau, Bouchardat, Murchison, and Bartlett are silent.

Another set of cases are met with in which there is an excited but a feebly acting heart and right ventricular debility.

This is more frequent in the young in my experience, and occurred so often that I could not regard it as coincidental.

Sarah B——, a bright, intelligent native girl, aged 10 years. She was taken with a distinct chill, followed by an exacerbation of fever on Oct. 20, 1876. Daily remissions and exacerbations, which were controlled by quinine, occurred for four days, but by the 27th the symptoms were: red, dry tongue; cough, with expectoration of whitish sputa; light delirium at night; considerable tympany, but no tenderness; constipation; pulse ranging from 100 to 120, and temperature running up to 105½° on the 12th day. Respiration normal, nor was there any sign of the lung apices being affected.

Careful auscultation with the stethoscope twice daily showed that on the 14th day, although the heart was excited and impulse pretty violent (the pulse being small and compressible), the debility was beginning with the second sound at the base. The systolic contractions at apex did not show sign of weakening to any extent, nor was the apical second sound intensified. There was no murmur at the aortic orifice, nor were there any unusual pulsations of the carotids or the jugulars. This heart was not structurally or organically diseased, but simply poisoned by the morbid principle of the fever.

Cases were noted in which there was a want of relation between the heart and the pulse. Impending paralysis of the heart passes unnoticed sometimes if the pulse only is relied on.

Here again the heart is our safest prognostician, for "every hour of compelled life is a clear gain."

John Byard, æt. 50—Ireland. Admitted Sisters' Hospital, July 7, 1876. History of remittent fever from July 1st, contracted at the San Fernando Tunnel. Symptoms: Temp., 104°; pulse, 120; respir., 28; dry,

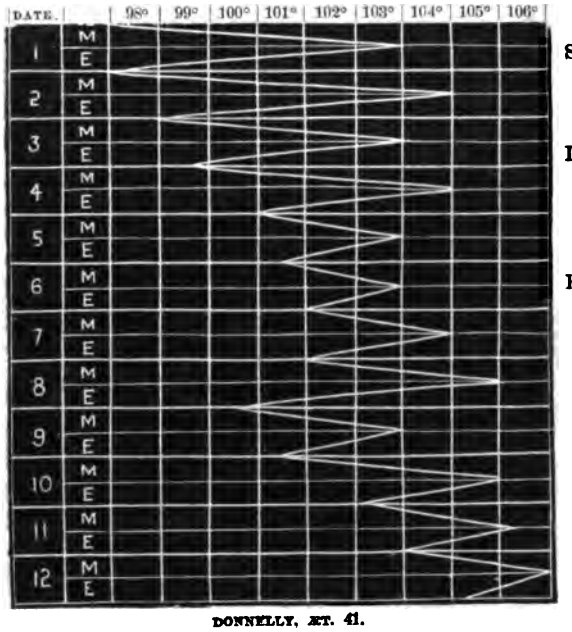
red-edged tongue; great restlessness and occasional delirium; abdomen swollen and tender; bowels constipated, and much difficulty in passing water. Slight hemorrhage from the bowels on the 13th, when the temperature was 105½°. The pulse now was 100, but the action of the heart was exceedingly quick and feeble. The first sound had disappeared and the impulse was almost imperceptible.

The heroic administration of whiskey and turpentine saved this man's life.

There is still another class of cases illustrating this secondary affection of the heart.

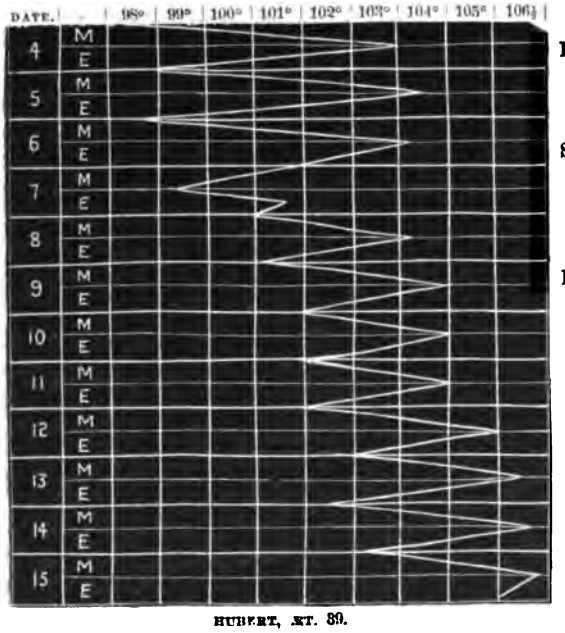
Adynamic typho-malarial fever presents a picture fully as terrible as the specific typhoid disease. Indeed, the characters are so nearly identical that, so far as treatment and prognosis are concerned, they might be classed as one and the same disease.

The following is a schematic representation of three cases that died in the Sisters' Hospital here in the month of July, 1876. The patients suffered from the remittent type of fever in the beginning, which gradually became continued. A characteristic group of symptoms were present, such as dry tongue, cough with expectoration, usually vomiting, inconsiderable iliac tenderness and tympany; in one case diarrhœa, in one constipation, and the third, slight hemorrhage from bowels. They sank into an apathetic condition, muttering, delirium; in one case extreme jactitation, involuntary evacuations, and before death, the hippocratic expression.



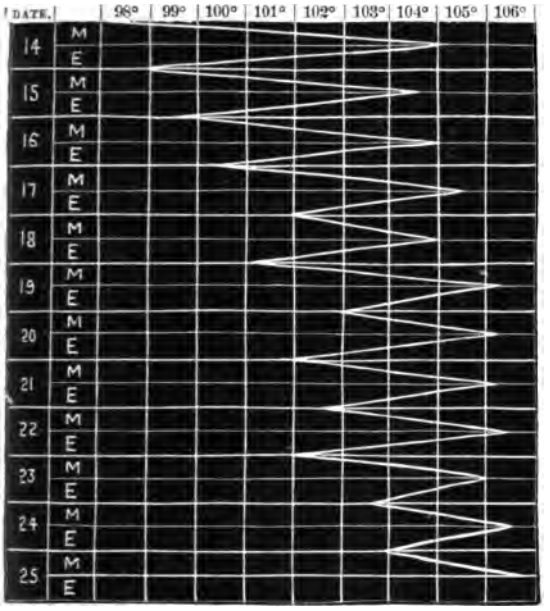
DONNELLY, ÆT. 41.

HEART.	POST-MORTEM.
Systolic debility; impulse weak; apical diastole prolonged.	*Brain*—Anæmic.
	Lungs—Congested, and, posteriorly, splenization.
Disappearance of first sound; loss of impulse; second sound short and valvular.	*Heart*—Soft and flabby.
	Stomach—Mucous membrane red and softened.
	Spleen—Enlarged and easily torn.
Before death, one weak, continuous sound, and no impulse—"Fœtal heart."	*Liver*—Enlarged and brown.
	Kidneys—Congested.
	Intestines—Near ileo-cæcal valve several small ulcers, the edges inverted and subjacent mucous membrane undermined; Peyer's patches and mesenteric glands unchanged; mucous membrane throughout intensely pigmented.
	Bladder—Softened and containing fetid urine.



HUBERT, ÆT. 89.

HEART.	POST-MORTEM.
First sign of weakness at apex, followed by valvular diastole.	*Brain*—Normal.
	Lungs—Hyperæmic; hypostatic.
Sounds at the base somewhat feeble and muffled; impulse very weak.	*Heart*—Pale and easily torn.
	Stomach—Mucous membrane reddened.
	Spleen—Soft and enlarged.
Before death, action excited, and gradually both sound and impulse became imperceptible.	*Liver*—Hypertrophied and brown.
	Kidneys—Enlarged and hyperæmic.
	Intestines—Mucous membrane engorged and stained with pigmentary matter; mesenteric glands swollen slightly; Peyer's patches unchanged.
	Bladder—Softened and very pale.



THOMAS, ÆT. 27.

HEART.	POST-MORTEM.
Systole weakening progressively, and diastole feeble and muffled; impulse feeble.	*Brain*—Healthy.
A *bruit de soufflet* heard over situation of aortic valve.	*Lungs*—Congested, and, posteriorly, consolidated; pigment induration.
Graduall loss of both sounds and impulse.	*Heart*—Flaccid and pale; dilatation left auricle; pourtour of aortic valve red and velvety.
Death sudden from heart-paralysis.	*Stomach*—Healthy.
	Spleen—Enlarged; trabeculæ easily broken down.
	Liver—Congested.
	Kidneys—Seat of small infarctions; enlarged.
	Intestines—Mucous membrane swollen and red; mesenteric glands swollen; Brunner's glands enlarged and congested.
	Bladder—Normal.

These cases agree in this particular, that they represent a type of extreme adynamia; and one would look for mesenteric ulceration and other invariable lesions.

This exemption of the intestines from the specific disintegration, the unmistakable pigmentation of the entire alimentary tract, as pointed out by Woodward, and the thermometic curve, are pathognomonic.

The heart-lesions present nothing to account for the abnormalities during life. Nor does the microscope as yet afford us any assistance. What may be revealed in future investigation is but a matter of conjecture.

But the heart may escape this secondary implication. A very small proportion of cases were observed in which this obtained. The reason is inexplicable. As Stokes says, "One patient may have the heart engaged; in another with the same character of fever, it escapes. This is all we can say." I pass over the important study of the treatment of the heart—our means of preventing, if possible, the dire results of cardiac debility. It is, indeed, a consummation devoutly to be desired that we shall be able to ignore the ancient imputation, "*spera infestis, metue secundis*," and encounter successfully a Proteus that hitherto has mocked medical foresight. Maillot's first law, "to combat the visceral lesions," applies with double import to the heart in fever. I cannot omit to mention, in conclusion, a condition of irritability of the heart remaining after an attack of this fever, which not infrequently resists many methods of treatment.

The patient complains of shortness of breath on exertion, palpitation, and some distress about the cardiac region.

Upon examination the impulse is a little more forcible than normal, and there is unnatural epigastric pulsation.

No abnormal sounds are detected; nothing, in fact, to account for the distressing symptoms.

Da Costa states, in his paper on "Irritable Heart" (*Am. Jour. Med. Sci.*, January, 1871), that out of two hundred cases of this affection 14.5 per cent. followed fevers.

The majority of my recorded cases having been hospital patients, I have not had opportunity of observing them subsequent to their discharge, and so get at the statistics.

CLASS-ROOM LESSONS ON SYPHILIS,

GIVEN AT THE COLLEGE OF PHYSICIANS AND SURGEONS IN THE CITY OF NEW YORK.

BY FESSENDEN N. OTIS, M.D.,

CLINICAL PROFESSOR OF GENITO-URINARY DISEASES.

[For THE MEDICAL RECORD.]

I.

CHANCRE, THE INITIAL LESION OF SYPHILIS—ITS MODIFICATIONS.

GENTLEMEN:—To-day we will begin the study of the characteristic forms of the initial lesion of syphilis, or *the chancre*, and the modifications which it may present.

First.—Chancre begins by a process of undue growth and multiplication of normal germinal cells, induced by contact (through a lesion of mucous membrane or integument) with diseased or degraded cells, derived from a person suffering from syphilis.

Second.—Cells thus generated accumulate at the point of initiation, in a circumscribed portion of the surrounding and underlying tissue, and also in the walls and interior of the blood- and lymph-vessels of the tissue so implicated, and thus form a characteristic neoplasm, which is termed the *initial lesion of syphilis*, of which there are five characteristic forms.

CHARACTERISTIC FORMS OF THE INITIAL LESION OF SYPHILIS.

The Indurated Papule.
The Dry Scaling Patch.
The Chancrous Abrasion.
The Saucer-shaped Non-suppurating Chancre, with indurated Base and Edge.
The Elevated, Moist, Velvety Papule.

MODIFICATIONS OF THE INITIAL LESION OF SYPHILIS.

Of the modifications of the initial lesion of syphilis there are three:

The Mucoid Form.

The Inflamed or Suppurating.

The Phagedenic or Gangrenous.

We also see modifications arising from

Implantation of the *virus of chancroid*, or other *vicious secretion*, upon the initial lesion of syphilis, of any one of the above described forms.

The initial lesion of syphilis may be concealed within the orifice of the meatus urinarius, the anus, or the mouth.

We will next study a little more in detail each of these characteristic forms of the

INITIAL LESION OF SYPHILIS.

The differences in form of the initial lesion of syphilis are the legitimate and direct results of interference, to a greater or less degree, with the circulation of the tissues, at, or beneath, the point of initiation of the abnormal cell-growth. Thus, in regard to the first-named form: *The indurated papule* is a dense neoplasm, in the cellular tissue, *movable* under the skin, and hence not materially impeding its functions. Complete absorption of this morbid growth may take place, and the organism become thoroughly contaminated with syphilis, without the occurrence of any open lesion.

In *the dry scaling patch*, which always occurs upon integument, the cell-accumulation is more diffused and quite superficial, producing an induration which, to the touch, is like *parchment;* hence the term, "*parchment induration*," applied to this lesion. Interference with the circulation in this case is not sufficient to prevent the evolution of the epidermis, but its development is impeded, and layers of dry epidermic scales cling to its surface, giving it a characteristic scaly appearance.

The chancrous abrasion occurs upon an indurated papule, which by peripheral cell-growth has come to involve the circulation of the cutaneous or epithelial structures, to the extent of rendering them friable and easily abraded. Imperfect evolution of the underlying cell-elements results in a free shedding of the superficial layers from the moist surface of the lesion. Under the microscope these are seen to be like laminated epithelial scales, and constitute a significant mark of *chancrous abrasion.*

In *the saucer-shaped, non-suppurating chancre, with indurated base and edge*, a characteristic loss of tissue has taken place (almost entirely at the expense of the adventitious cell-growth) through the continuance and extension of the causes which produce the *chancrous abrasion:* loss of tissue as in that case also occurring, not through the suppurative or ulcerative process, but by that which Virchow has termed a *necrobiosis* (death from altered life), that is, from a gradual obstruction to the processes of nutrition of the affected part—the secretion of this form of initial lesion, scanty, free from pus, and presenting under the microscope the squamous epithelial elements found in the secretion of the chancrous abrasion.

The elevated, soft, velvety papule is neither more nor less than the previously described lesion, "*The saucer-shaped, non-suppurating chancre, with indurated base and edge*," upon which the *granulation tissue* of Billroth has been developed. This tissue is described in Billroth's *Pathology*, Am. ed., page 3, under the head of "*Proliferating Fungous Granulations.*" He says: "The most frequent cause of the development of such granulations is, *any local impediment to healing, such as rigidity of the surrounding skin*, so that the contraction of the cicatrix is difficult. This rigidity, in the case of the soft velvety papule, is caused by the characteristic induration of syphilis, always associated with this form of initial lesion.

We shall consider next,

THE MODIFICATIONS TO WHICH THE DIFFERENT FORMS OF INITIAL LESION ARE SUBJECT.

The mucoid chancre is that modification of the *moist, velvety papule* which arises from the occurrence of a diphtheritic membrane, or deposit upon its surface, giving it the appearance of that secondary or constitutional manifestation of syphilis known as the *mucous papule.* This modification usually takes place coincidently with the appearance of mucous papules, or patches, in other localities. The *induration* associated with the *initial lesion*, thus modified, and its entire absence in the *mucous papule*, will constitute the distinguishing difference between these lesions.

The Inflamed or Suppurating Chancre.—Any of the open initial lesions, subjected to persistent irritation from friction of clothes, repeated coition, application of caustics, alcoholic excess (especially in the scrofulous and debilitated), may set up an inflammatory action. This soon results in pus-formation and a more or less active necrosis, so like in character to that occurring in chancroid that errors in diagnosis are easy. The now purulent secretion of the chancre is found to be contagious, producing, by auto-inoculation, a sore identical with true chancroid, thus further obscuring the differential diagnosis. Previous history, and the induration more or less distinctly marked, will usually be sufficient to establish the true character of this lesion.

The Phagedenic or Gangrenous Chancre.—In certain cases of the inflamed or suppurating initial lesion, the indurated tissue becomes livid in color quite suddenly, and exhales a peculiar sickening odor, announcing the occurrence of gangrene. This results from arrest of the vascular supply to the induration, through an aggravation of the causes which led to the antecedent *necrobiosis.* This view is sustained by the known influence of mercury in staying or arresting the destructive process thus set up in the initial lesion, while in any other form of gangrene the influence of this drug is known to be pernicious; and also from the fact that the loss of tissue is usually limited to the induration. When the death of tissue occurs, by molecular continuity, the lesion is said to be *phagedenic;* when the induration sloughs out *en masse* it is called *gangrenous.* The influences which tend to convert the inflamed or suppurating initial lesion into the phagedenic or gangrenous are: *predisposition to suppuration from any cause*, constitutional dyscrasia, alcoholic excess, low, irregular life, etc.

MODIFICATIONS FROM IMPLANTATION OF THE VIRUS OF CHANCROID, OR OTHER VICIOUS SECRETION, UPON THE INITIAL LESION OF SYPHILIS.

All forms of the initial lesion of syphilis may be modified and more or less obscured by the occurrence of ulceration, from any cause, upon the site of syphilitic inoculation.

No surface changes at the point of entry of the syphilitic virus, or principle can affect the course of the syphilitic infection after the disease-germ has passed into lymph-channels (spaces or vessels) below that surface. The characteristic local evidences of syphilitic infection may, however, be modified, and more or less completely obscured, by accidental lesions, such

as herpes resulting from contact with vicious vaginal and uterine secretions, or, by contact of the lesion of syphilitic inoculation with the virus of chancroid. Such lesions pursue their course, uninfluenced by the syphilitic cell-proliferation previously inaugurated, and may thus obscure diagnosis, until evidences of constitutional infection are manifest. Hence, wherever the *possibility* of a syphilitic infection is present, any breach of tissue, whether a simple abrasion or fracture of mucous membrane or integument, or any vesicle or pustule, whether from general or venereal causes, whether healing as if simple, or pursuing the characteristic course of the chancroid; then, in such case, opinions in regard to the *presence* or *absence* of the *initial lesion of syphilis* must be reserved until such time, from the date of latest exposure, *as will equal the longest period known to obtain between inoculation and syphilitic infection*, as indicated by induration of the local lesion and enlargement and induration of the adjacent lymphatic glands. This is not less than forty days.

The Incubation of Syphilis.—This is a term usually applied to the period which elapses from the date of inoculation to the appearance of the characteristic initial lesion, and varies in different cases, and according to different authorities, from nine to seventy days, the usual time being from ten to twenty-five days. Strictly speaking, syphilis has no period of true incubation, inasmuch as the process of cell-proliferation is undoubtedly established at the moment the virus (disease-cell or germ) comes in contact with the germinal or white blood-cell of the human organism.

The immediate effect of such contact seems to be a rapid increase in the process of proliferation of such of the normal white blood-cells as have become contaminated, or degraded, by the influence of the virus (disease-germ) of syphilis. Through accumulation of this degraded product, the tissue, including the vessels of nutrition at the point of initiation of this process, becomes densely packed (Biesiadecki), forming a neoplasm of greater or less extent. The process of degradation or infection is confined to the immediate locality of the inoculation, until the degraded cells have gained access to the interior of a lymphatic vessel. Through this channel the diseased cells are carried to the nearest lymphatic gland (the *gland of connection*, as it may be termed), and here are arrested by the peculiar conformation of the gland structure, for a longer or shorter period (usually about six weeks), during which time there is no further evidence of constitutional infection.

This period of *apparent* rest is usually termed the *second* incubation of syphilis.

A LARGE DOSE OF STRYCHNINE, WITH RECOVERY—TEMPORARY PARALYSIS OF THE BLADDER.

REPORTED BY O. G. SELDEN, A.B., M.D.,

OF CATSKILL, N. Y.; FORMERLY MEMBER OF THE WISCONSIN STATE BOARD OF HEALTH.

(Read before the Greene County, N. Y., Medical Society.)

ON the 9th day of September, 1877, I was called to see A. Manning, farmer, aged 44 years, residing in Monroe County, Wisconsin. I was informed that the patient had been for some months somewhat insane; at least that was the opinion of his friends and neighbors; also that the night before my visit, at about twelve o'clock, he had taken a large dose of strychnine with suicidal intent. He lived about ten miles from the town where I resided, and when I arrived at his house it was seven o'clock A.M. I found him suffering from a very rigid tonic contraction of all the muscles of the lower extremities, rendering them fixed in a straight, extended position. No flexion of the legs could be accomplished either at ankle, knee, or hip, without making use of greater force than I thought justifiable. The jaws were also firmly set, and the patient could not open his mouth by any effort he was able to make. The muscles of the trunk, chest, and upper extremities, were but slightly, if at all, affected. Pulse 103, temp. 100°, body bathed in warm perspiration. Accompanying these conditions there was a peculiar nervous erethism, almost exactly resembling what I had seen in a case of hydrophobia several years before. The patient was very much alarmed and excited, slightly delirious, answering questions correctly when asked, but wandering when left to himself, and begged most piteously that I would not hurt him. I was forcibly struck with the very marked resemblance of the delirium in this case to that which I had often seen in *mania a potu*. The same nervous restlessness and fear of being injured, the same hyperæsthesia and shrinking from currents of air, made the similarity very striking. From the patient I learned that several days before he had purchased twenty-five cents' worth of strychnine, and that at midnight previously he had taken about half of it. He pointed out where the remainder was hidden, so that a member of his family found it and brought it to me. No vomiting had occurred since the poison was taken. The length of time that had elapsed from the taking of the poison made it evident that an emetic could do little or no good, and it was necessary to husband the strength of the patient. Then no medicine could be given per orem, without great difficulty and with little satisfaction. I therefore gave, hypodermically, fifteen drops of a solution of sulph. morph., five grains to the fluid drachm, and five drops of Tilden's fluid extract of belladonna, having had no atropine with me. In about half an hour the rigidity of the muscles was so far relaxed that the patient could open his mouth slightly, and ten grains of tannic acid were administered. The extreme nervous erethism of the patient was subsiding, and the profuse sweating somewhat diminished. Being obliged to leave my patient, I secured the services of an intelligent nurse to remain with him until my return on the next day. I explained to him the physiological and therapeutic action of belladonna, and directed four drops of Tilden's fluid extract to be given every two hours until extreme dilatation of the pupil took place, and continued every four hours thereafter, and ten grains of tannic acid every three hours until my return. I saw the patient next day, found the rigidity of muscles entirely relieved, also found him free from nervous agitation. I was informed by his wife that he was much more like his former self than for months before. It is unnecessary to detail the treatment day by day; it consisted in giving belladonna, sometimes with camphor, and free doses of tannic acid. Large doses of cathartics were at first necessary to procure a movement of the bowels, and the black draught seemed to do better than any other form of cathartic. After about ten days perfect paralysis of the coats of the urinary bladder came on, and the regular use of the catheter was necessary for about two weeks, when the normal function of the bladder was gradually restored. No specific treatment was had for the vesical paralysis other than general tonics of bark and iron, and the regular use of the catheter. In about two months the patient entirely recovered the use of his

physical and mental faculties, and up to March, 1878, remained, to all intents and purposes, *mens sana in corpore sano*.

In considering the above case the first question suggested is, how much strychnine did Manning really take? Unfortunately this cannot be exactly ascertained. Perhaps, however, the evidence in this case is as definite as we usually meet in similar cases. It is as follows: the patient, after his entire restoration to health, mental and physical, told the same story as when I first saw him; *id est*, that he had taken about half of what he had purchased. On my return home from my first visit to Manning, I went to all the drug stores in the town where I lived, and found that he had purchased from Gunn & Richards fifteen grains of crystallized strychnine, and the amount I had secured weighed a little over seven grains. This would make the dose taken between seven and eight grains.

Now, the largest dose of strychnine taken by any one who survived, that I have seen reported, is seven grains, and in connection with that report grave doubts are expressed as to the purity of the preparation taken. Manning took what appeared to be a pure article, and the bottle from which it was taken bore the mark of Powers & Weightman. Strychnine kills by producing a tetanic spasm of the muscles of respiration, setting up a mechanical asphyxia. Tetanic fixing of the cardiac muscles is also a probable factor in the cause of death. In the foregoing case the toxic effect of the poison seemed to expend itself on the muscles of the lower extremities and the jaws.

This man evidently escaped death in one of three ways: 1. The poison may have been impure. 2. He might not have taken the amount alleged. 3. From some idiosyncrasy the toxic effect did not take its usual course. Let those more familiar with strychnine-poisoning than the writer form their own opinions. Query: Is vesical paralysis a common symptom in those who survive strychnine-poisoning?

CATSKILL, June 14, 1878.

Reports of Hospitals.

PRESBYTERIAN HOSPITAL, N. Y., AND HOSPITAL DEPARTMENT OF COLORED HOME, N. Y.

ANTISEPTIC DELIGATION OF ARTERIES IN CONTINUITY.

SERVICE OF DR. CHARLES K. BRIDDON.

THE three following cases have come under the observation of Dr. Charles K. Briddon within the past few months; one in the service of the Presbyterian Hospital, the others in the hospital department of the Colored Home. They all alike illustrate in a very marked manner the advantages of the treatment of aneurism by the antiseptic method. Up to within a very recent period, those who have advocated the dressing in simple wounds, and even in those complicated by fracture of the long bones, have hesitated about applying the catgut ligature in the continuity of a large artery.

Previous experience in the "Home" justified the apprehension that any treatment was likely to be followed by disaster. One of the subjects was a broken-down syphilitic; the other had caries of the bones of the face at the time of the operation; yet in the first of these only one dressing was applied subsequent to the one used immediately after the operation; in the second case, two dressings were required: in the third case, occurring at the Presbyterian Hospital, the parts were found entirely healed on the removal of the first dressing, seven days after the operation.

The only departure from the dressing advised by the distinguished author of the method was the absence of drainage-tubes; it was thought that the superficial character of the wound warranted the omission, and the results appeared to justify it. It will be remarked that a rather large (E violin string) ligature was used in all these cases; they were prepared by the operator himself, according to the prescription of Lister, and they were soft and pliable, and in every respect superior to those imported from Edinburgh; none of the sutures were removed; the loops disappeared, either by process of conversion or absorption, and the knots rubbed off into the dressings.

POPLITEAL ANEURISM—LIGATION OF FEMORAL ARTERY—CURE.

(Reported by ALBERTO LACAYO, M.D., House-Surgeon.)

John Gree, married, æt. 36; Ireland; fireman. Admitted to the Presbyterian Hospital June 13, 1878, service of Dr. Briddon. Patient gives a syphilitic history of nine years' standing, and has had gonorrhœa twice, the attacks lasting about three months, and accompanied by suppurating buboes on each occasion. Otherwise he has always been healthy. About six months ago he noticed his knee was becoming stiff, and felt a very strong pulsation in the popliteal space. Ever since then he observed that a tumor was developing in that situation. The pain from which he suffered increased with the growth of the tumor. On admission, a lump about the size of a lemon was found at the upper part of the left popliteal space, presenting all the characteristic symptoms of aneurism.

June 17th.—The patient was anæsthetized; the limb being slightly abducted and rotated outwards, an incision about three inches long was made at the apex of Scarpa's triangle over the line of the artery. After cutting through the integument and deep fascia, the sheath of the arterty was exposed, opened, and an unarmed aneurism needle was passed under the artery from within outwards; then it was armed with a carbolized catgut (E violin string) ligature, and withdrawn. A nerve (supposed to be a branch from the anterior crural) was found in front of the artery; but was isolated to admit the passage of the ligature, which was secured by a square knot, and cut short. The wound was closed with catgut sutures. The lower part of the limb was enveloped in cotton wadding, secured with a four-inch roller-bandage. The operation was conducted under Lister's antiseptic method.

On the 24th of June the dressing was removed, and the wound was found healed by first intention; but, as a precaution, it was again dressed antiseptically. Patient was subsequently discharged cured.

(Reported by R. G. WIENER, M.D., House-Surgeon.)

Anne J., æt. 36; N. Y.; widow, domestic, mulatto. Admitted to hospital department of Colored Home March 26, 1878, service of Dr. Briddon. Family and previous history good; been pregnant twice; regular and temperate in her habits. In good health until four months previous to admission. At that time a swelling showed itself at lower and outer portion of popliteal space, which was very painful, and was increasing in size; it was treated successively as erysipelas and synovitis. On admission, patient was in excellent physical condition. Examination reveals a pulsating tumor situated at the lowest portion of the popliteal space, behind and a little to the outer side of the external tuberosity of the tibia. Limb is semi-

flexed on thigh; tumor size of a goose-egg; bones in proximity not enlarged. On auscultation a soft blowing murmur is heard. Pressure on femoral causes a stoppage of bruit and pulsation; circumference of limb at tumor, 15½ inches; of healthy limb, at same place, 11½ inches.

March 30, 1878.—Dr. Briddon ligated the femoral artery, using Lister's apparatus and antiseptic dressing, as well as catgut ligature. Patient rallied well from operation.

April 7, 1878.—First dressing removed, because discharge presented itself. Dressing renewed next day. Permanently removed on April 15th, fifteen days after operation.

April 20, 1878.—Patient sits up; tumor very small size; no pulsation, no pain.

(Reported by F. HUBER, M.D., House-Surgeon.)

Ed. B., 35; m.; lab.; brown skin. Admitted to hospital department of Colored Home, March 3, 1878, service of Dr. Briddon.

Family history fair; a well-defined syphilitic history. Has had articular rheumatism; five weeks previous to admission noticed a swelling, gradually increasing in size, in the left popliteal space, accompanied by severe pain, especially at night, and progressive emaciation. On admission, patient is in poor condition, suffering great pain. The left leg is semiflexed, and in the popliteal space is situated a tumor the size of a goose-egg, giving all the signs of aneurism. Circumference of affected limb, at most prominent portion, 15½ inches; of other limb, 13½ inches.

March 18, 1878.—Dr. Briddon ligated the femoral artery, using Lister's apparatus and catgut ligature. The vessel was found with some difficulty, on account of its small size, and was adherent to the sheath. Patient rallied well from operation.

March 25, 1878.—First dressing removed; wound almost completely healed by first intention; no pulsation in sac. Patient comfortable; dressing renewed.

March 30, 1878.—New dressing applied.

April 9, 1878.—Dressing permanently removed. Patient stretches his limb; tumor markedly diminished in size.

April 20th.—Walks about ward.

Progress of Medical Science.

THE NEUROSAL AND REFLEX AFFECTIONS OF THE HEART.—Dr. J. Milner Fothergill devoted the concluding lecture of his course on diseases of the heart to the neurosal and reflex affections of that organ. These affections are mainly palpitation, irregularity, and intermittency, of which palpitation is the most frequent. This may be often found with a debilitated condition of the muscular walls of the heart, where an increase of pressure within the cardiac chambers in diastole induces active ventricular contractions. It may also be found in subjects of gout, or lithiasis, or in women at or about the menopause, due to peripheral spasm and consequent increased obstruction to the ventricular systole. In the first form, that associated with muscular failure, digitalis, or strychnia, or belladonna is indicated; in the second form, relaxation of the contracted arterioles by the inhalation of amyl is the correct line of treatment. There is another form of palpitation which may be a reflex phenomenon, due to some uterine, ovarian, or genito-urinary affection, or which may be a true neurosis of the cardiac ganglia. In the treatment of this form, the causal indications should be fulfilled as far as possible; bromide of potassium should be used to lessen the conductivity of the nervous tracts. The bromides, with or without iron as may be required, are indicated when the cardiac ganglia are involved. Where the palpitation is due to sudden changes in the peripheral arterioles, tonics, with which the bromides in some form may sometimes be united, are usually indicated. In chorea the palpitation subsides with the other symptoms; in Graves' disease it is very little amenable to treatment, but of all remedies belladonna is most frequently useful. The "Irritable Heart," of Da Costa, is sometimes benefited by cardiac sedatives, like aconite, while in other cases digitalis and strychnine are more useful. Irregularity of the heart's action is frequently found with dilatation, and, when palpitation on slight effort is also present, is of diagnostic value; in other cases it is of no moment. Intermittency may be a mere nervous phenomenon, or may be found with evidences of decaying arteries, where it is probably due to imperfect nutrition of the cardiac ganglia. Its value varies with its surroundings; it may be of great import or of no moment. Closely allied to this is the abnormally slow pulse of some persons or families; this is only a morbid state when the brain is insufficiently supplied with arterial blood. —*The American Practitioner*, June, 1878.

TREATMENT OF ACNE ROSACEA.—Prof. Hebra, of Vienna, reports six cases of acne rosacea, with the view of illustrating the different modes of operative treatment that may prove serviceable against this affection. Two of the cases presented the first degree of the affection, viz., cutaneous redness with dilatation of the vessels. These were treated by repeated punctures, which brought about the obliteration of the dilated vessels. The instrument used was a needle with a lance-shaped, two-edged blade, about one-twelfth of an inch long, and provided with a shoulder to keep it from penetrating too deeply. In performing the operation, Prof. Hebra stands behind the patient, who is seated in a chair, with the head bent backwards. He makes the punctures as close together as possible, and with the rapidity and regularity of a sewing-machine. At each puncture the needle is driven in, until it is arrested by the projecting shoulder with which it is provided. If possible, the entire morbid tissue should be operated on at a sitting. The hemorrhage is always considerable, but it is readily controlled by compression. The dressing consists of dry charpie secured by a bandage, and it should be renewed daily. Should suppuration occur, which, is rare, the dry dressing must be replaced by lead ointment or simple cerate. Sometimes it is necessary to repeat the operation several times before a cure is effected.

Two of the six cases presented in addition to the telangiectasis, considerable thickening of the cutis and numerous pustules. They were treated by scraping with the sharp curette. Although the curette only scrapes off the epidermis, the operation apparently causes obliteration of the vessels, as it is followed by disappearance of the redness and thickening. Not unfrequently, it is true, this result is only obtained after repeated operations and the development of superficial suppuration. Superficial nævi have sometimes been destroyed by a similar application of the curette. In the two cases reported, the operation was entirely successful.

Finally, the two remaining cases presented the third degree of acne rosacea, viz., great thickening of the skin of the nose, with the development of fleshy ex-

crescences. These were treated by the knife, the protuberances and hypertrophied parts being cut off or trimmed down. In one of the cases, a fleshy mass, which extended nearly an inch beyond the nasal cartilage, was removed by the elastic ligature for fear of hemorrhage, but Prof. Hebra states that in a similar case he would not hesitate to remove the mass at once with the knife. In each case he succeeded in forming a very presentable nose, to the great delight of the patients and his own satisfaction.—*Wiener med. Wochenschr.*, Jan. 5, 1878.

THE OPERATION OF GASTRO-HYSTEROTOMY.—A very interesting *résumé* of the operation of gastro-hysterotomy in America has just been published by Dr. Robert P. Harris, of Philadelphia. This is the result of eight years of labor, and, while all Cæsarean sections were diligently sought for, care was taken to exclude all cases in which the uterus was not incised. One of the greatest difficulties with which the surgeon had to contend has been the exhausted state of the patient at the time of operation, labor having frequently continued for days before relief was afforded. Of seventy-two cases occurring in the United States, but seventeen were operated upon within the first twenty-four hours; of these 70 per cent. of the mothers, and 80 per cent. of the children were saved. There are presented in all eighty cases for North America, with the recovery of forty-two women and the loss of thirty-eight. Nine cases more have been heard of as occurring in the United States, with six recoveries, but these are not included in the report. The propriety of employing uterine sutures is, perhaps, still a question, although in some of the cases death was apparently averted by their use. They were used in twelve cases with five recoveries; in three of the latter the silver-wire suture was employed. The experience both of this country and Europe tends to show that the catgut suture is unreliable, and the prevailing impression is in favor of silver wire as the best substance to be employed. A case is reported in which death took place thirty hours after the insertion of three silver-wire sutures in the uterus; at the autopsy, the uterine wound was found entirely united. Cold-water dressings and the antiseptic dressing of Lister have been used with advantage. Several cases on record were saved by reopening the abdominal wound above the pubes, and cleaning out accumulated discharges and secretions. It is thought to be fair to estimate the *general* result of American cases as a saving of 50 per cent. of the women: of the *timely operations*, from 70 to 75 per cent. of both women and children.—*The American Journal of the Medical Sciences*, April, 1878.

DA COSTA ON GASTRIC VERTIGO AND THE HYPODERMIC USE OF IRON.—The subject of the following clinical remarks was a widow forty-six years of age, who had passed the menopause, was free from constitutional disorder, rheumatism excepted, and whose life had been passed in comfortable circumstances. Palpitation and some uterine ailment were the only subjective affections additional to these now to be described. They consisted in giddiness, vomiting of greenish matter, with intense pain in the stomach, back, and eyes, and general debility. Palpation showed tenderness over the epigastric region, and auscultation a basic heart murmur. Temperature 98°; pulse 80; respiration twenty to the minute. The urine contained no albumen and no sugar. Specific gravity was low. Two distinct explanations of the difficulty had offered themselves: 1. That the case was one of brain disease with gastric disturbance. 2. That the root of the difficulty lay in the stomach. The differential diagnosis turned mainly on the presence of a coated tongue and painful digestion, both belonging to gastric trouble rather than brain disease. Other additional peculiarities pointing towards gastric vertigo were: 1. Some relief of the symptoms when in the recumbent position. 2. The vertigo was objective, *i. e.*, external objects moved, not the body itself. 3. The giddiness came on in seizures (some every six months, lasting a few days). If in an attack a patient did but seize an object, the vertigo was temporarily arrested. Negative signs were absence of persistent headache, of motor palsy, or sensory disturbance. The ophthalmoscope might aid, though it was not well to lay too much stress upon it.

Prognosis is favorable, though recovery may be slow. Dr. Da Costa thinks a plausible explanation is the one that has been offered—*i. e.*, that it is a sympathetic disturbance of the vessels of the brain, due in some measure to the influence of the vaso-motor system. The direct anatomical connection between brain and stomach has been shown by Dr. Woakes, who traced "a filament of the pneumogastric nerve on its way to join the lower cervical ganglion, and from the point of junction to the labyrinth of the ear through the inhibitory nerves furnished to the vertebral artery from the ganglion."

Treatment consists essentially, after attention to the diet, in the giving of bitter tonics and alkalies. Alkaline waters, such as Vichy and Karlsbad, should be taken after meals. The stomach should also be invigorated by bitter tonics before meals; subsequently iron, with the thirtieth of a grain of strychnia, three times daily, is valuable.

Iron is a good remedy, both internally and by hypodermic injection late in the disease, when the stomach is improved, but not in the early stages, as it is not always well digested and may produce constipation. As for dialyzed iron by hypodermic injection, Dr. Da Costa has seen the most gratifying results in a case of chlorósis where the stomach was not very retentive. At first fifteen minims of pure dialyzed iron diluted was employed daily; this amount was gradually increased to thirty minims. Improvement was not marked. The menses came on regularly, digestion improved rapidly, the color returned to the lips, gums, and tongue, and the "venous hum" grew faint and distant. Subsequent results have not been so favorable. Constitutionally they have been good, but locally unsatisfactory, because of the local irritation produced.

Two bottles of dialyzed iron, purchased at the same time and from the same maker, have shown different results; one producing irritation, and the other not. Different effects were also obtained from the same bottle of iron. Still, its use has not been given up. Lately, however, he has used the ammonio-citrate of iron. He injects from two and a half to five grains of the ammonio-citrate in fifteen minims of distilled water, and has never seen any bad effect, locally or otherwise. These statements, however, are provisional merely. Instantaneous nausea is produced in some cases, but as this sometimes follows the use of plain water, imagination must largely be the cause.—*Bost. Med. and Surg. Journal*, June 6, 1878.

DR. EHRMANN, honorary Dean of the old Faculty of Medicine of Strasbourg, died on June 19th, at the age of eighty-six years.

DR. KARL MAXIMILIAN KOHLER, the Nestor of the medical profession of Würtemberg, died recently at the advanced age of eighty-nine years.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE. F. SHRADY, A.M., M.D., Editor.

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HOSPITAL APPOINTMENTS.

WITHIN the past few weeks the profession of Chicago has been much exercised concerning some hospital appointments that have been made there. As the experiences in the canvass have a universal application, we propose to state them previous to the offering of some remarks which suggest themselves under the circumstances.

The old hospital board was composed of twelve men —*i. e.*, the active board; nine were from the colleges and three from outside. It had almost without exception worked harmoniously. When, from time to time, however, a vacancy occurred, there had been complaint from men outside that the colleges were more than warrantably grasping. While this was true, it should be said that there was much greater contention among the college men themselves, as to which of the three regular schools should be favored in the filling of appointments. Many years ago the staff consisted of men not connected with colleges at all. Within eleven years no less than six men of that non-college staff have become professors in the medical schools, some in Rush, some in the Chicago, and some in the Woman's College. At the time of the revolution there were four voting members of the Board who were members of the faculty of Rush, and four who were of the faculty of Chicago College. But Rush had her four men on duty, while two of Chicago's men were not on the active, but the consulting corps of the Board. Besides, one other member of the active board held a subordinate position in Rush, and several of the non-college men notoriously favored Rush in voting. Naturally the Chicago College complained of this. The reply of Rush was that she sent two hundred and fifty students each year to the hospital, while Chicago—four miles away—sent none, and the Woman's sent yearly only perhaps a dozen.

The Board of County Commissioners, which has always had the appointing power heretofore, has always respected the nominations of the Medical Board whenever vacancies have occurred, until a year or two ago, when a man was nominated to fill a vacancy caused by the death of the late Prof. Freer, the nominee belonging to the faculty of Chicago College. This nomination was violated, and a Rush man elected by the political body. Doubtless this was brought about wholly by the political influence and exertions of the friends of the successful man; for the Rush faculty did not favor the move, but, on the contrary, they always deplored it as furnishing a dangerous precedent, to say the least of it. But some of the friends of Chicago College believe to this day that the Rush faculty aided in the matter. At any rate, the feeling of discontent on the part of the former college, at the ascendancy of the latter, has increased since that event. This feeling has had much to do in bringing about the present reorganization. It was doubly effective, as one member of the Board from Chicago College was exceedingly bitter in partisan feeling, freely declaring he would have justice for his college, or see the medical control turned over to politics and the irregulars entirely.

As soon as the Board of Commissioners were told by a member of the Medical Board how bad and rotten the latter was, how much it was run in the interest of Rush College, and how it needed reorganization, they believed it at once. Very innocently inferring that there must be something wrong, or they (the doctors) would not be quarrelling, they very magnanimously took matters into their own hands with the view of applying a suitable remedy.

Then there were several outside doctors of much political influence who pushed for places, and one who freely worked to revive an old moral scandal against a member of the Board, for the purpose of having him ousted, that he might have his place.

As the result of all this the Medical Board of the hospital was legislated out of existence by the Commissioners, and a new Board elected in the following manner: three men on nomination of Chicago College, three on nomination of Rush, while seven outside appointments were made.

There are a number of aspects in which this trouble can be viewed which may be profitable to other medical boards of hospitals similarly situated. There are good reasons why colleges should not monopolize hospital appointments; but, when the said colleges have no more than their proportion, the best interests of the profession and of the public are subserved. Of course, even under these circumstances, it is to be expected that there will be an active canvassing for the places to be filled by particular institutions; but nothing more should be done to effect the result. The moment a medical board quarrels and appeals to lay managers to settle difficulties, that moment its

prestige is gone, and, as in the present instance, what was first merely unfortunate becomes in the end positively disastrous. We have never known any medical board to be the gainer by such proceedings, but, on the contrary, the almost invariable rule has been to lose ground, to invite the appointment of incompetent men, and to open the door to persons who have more political than medical reputation. There is no doubt that the medical board in question has made a dreadful mistake, and that the end of the unfortunate squabble has not yet come. As an illustration in point, the Board of County Commissioners, on the day of election of the new medical board, were memorialized by the Homœopaths to appoint a representative of their body, by the Ladies' Christian Union to appoint one woman physician for the lying-in department, and by the Eclectics to be similarly represented. By the political accident of a foregone conclusion, none of these recommendations were heeded, else the consequences might have been even more regretful. There can hardly be any credit for good intentions on the part of the Commissioners, as a nomination of candidates from the Chicago Medical Society was significantly ignored.

The general profession of Chicago very properly feel greatly scandalized by this move in the direction of political management of professional matters, and many of the Commissioners are also disgusted with what they themselves have done.

The hospital loses by the change Dr. Bogue, who has done excellent duty in the surgical wards for years; Dr. Fitch, who has been one of the gynecologists for many years; Dr. H. M. Lyman, and others, and gains a number of untried men, two or three of whom can hardly do clinical work, and one of whom has not been in Chicago a year.

But this is nothing but the old story—delivering the citadel to the enemy because of a petty quarrel among the garrison. The old fable of the bird who fouls his own nest has a certain application to the history of this and similar troubles. Not only does the bird do a very unnecessary and stupid thing, but he spoils the nest for his companions, and makes himself homeless.

QUACKERY AND THE CLERGY.

In its efforts to educate the people upon sanitary matters, and in its struggles to elevate medicine to a science before the public, the medical profession has no more formidable antagonistic influence than that exercised in general by the clergy. The latter, as educated men, are looked upon as teachers for the community, have an influence with their audiences which is almost supreme, and yet choose to use that influence in an ignorant and prejudiced manner against legitimate and scientific medicine. There are exceptions to this general rule, it is true, in many leading clergymen, who abominate quackery in medicine as they do hypocrisy in religion, and who at all times and on all occasions uphold the hands of the physician; but these, alas! are only exceptions, too insignificant to weigh in the balance against the host of their brethren who, not only in the way of omission, but of commission, openly, nay defiantly, sin against our profession. How often is the physician called upon to blush for some prominent divine who boldly recommends a patent medicine, who certifies to its efficacy either upon himself or some member of his family, who endorses fraudulent testimonials of cure-alls, and who eloquently advises the public to patronize some miserable, bare-faced quack. But this is an evil which is growing into such proportions that it is time the clergy as a body should have its attention directed to it with a view of suggesting some remedy. It strikes us that they are travelling out of their sphere in professing such a knowledge of medicine as enables them to prescribe remedies for the sick, and especially the latter whom they can only reach through the advertising columns either of the secular or religious papers. Then, again, diagnosis is a science to which the profession have for centuries paid a good deal of serious attention. Aside from the ridiculous presumption of the undertaking to diagnosticate and treat disease, there is a responsibility about it which few right-minded and conscientious men would care to assume. Unfortunately, the practice of medicine cannot be dispensed, even by experts, in a wholesale manner, and no particular cough mixture, medicated lozenge, kidney stimulator, or blood purifier has such a wide-spread application as, for instance, a sermon on original sin, on human depravity, or on the necessity of spiritual regeneration. If the profession would turn about and from its standpoint preach sermons upon these texts, how many striking examples could be found among the very men whose vocation is to teach us to avoid even the appearance of evil. The religious press are in no small degree accountable for such a state of affairs—in fact, openly encourage it by the insertion of the most objectionable quack advertisements. When the latter is done under the guise of religious instruction, language is too weak to express our condemnation of the hypocrisy. When medical men discuss theological questions and oppose sectarian doctrines, they are stigmatized as infidels, but clergymen can cure consumption with stewed chamomile, and can arrest Bright's disease with oyster shells and saltpetre, and still be the trusted advisers of the people. Is it not time that these frauds should be exposed?

Oregon State Medical Society.—At the fifth annual meeting, held at Portland, Oregon, June 18th, the following officers were elected for the ensuing year: President, Dr. H. Carpenter, of Salem; Vice-President, Dr. F. A. Bailey, of Hillsboro; and Secretary, Dr. Curtis C. Strong, of Portland. The next annual meeting will be held in Portland.

Reviews and Notices of Books.

A MANUAL OF OPERATIVE SURGERY. By LEWIS A. STIMSON, B.A., M.D., Surgeon to the Presbyterian Hospital, N. Y., etc., etc. With three hundred and thirty-two illustrations. Philadelphia: H. C. Lea. 12mo, pp. 477.

THE work before us is a well-printed, profusely illustrated manual of over four hundred and seventy pages. Our author has endeavored, as the result of much painstaking and careful study, to present to the student and practitioner a trustworthy digest of the most approved methods of operating. In such efforts he has been signally successful. As he truthfully says, "In a preparation of a work of this character large drafts must be made upon the results of the labors of others," but the presentation of the general subject from his standpoint proves him to be capable of making judicious selections and judicial comparisons. The novice, by a perusal of the work, will gain a good idea of the general domain of operative surgery, while the practical surgeon has presented to him within a very concise and intelligible form the latest and most approved selections of operative procedure. Perhaps a better idea of the general scope of the manual can be given by the following reference to the contents: Part I. treats of the accessories of an operation, in which, among other matters described, is the induction of anæsthesia, arrest of hemorrhage, the antiseptic method, sutures and bandages; Part II. comprises the ligature and surgical anatomy of special arteries; Part III., amputations; Part IV., excisions of joints and bones; Part V., neurotomy and tenotomy; Part VI., plastic operations on the face; Part VII., operations upon the eye, ear, mouth, pharynx, neck, thorax, stomach and intestines, genito-urinary organs of male and female, and lastly miscellaneous operations. The precision and conciseness with which the different operations are described enable the author to compress an immense amount of practical information in a very small compass. The illustrations are on the whole well selected, and with the exception of those on plastic operations are well executed. The original ones are very few in number, a fact to be regretted, considering the admirable manner in which they serve their purpose, particularly those marking the different lines of incisions in a few of the amputations and exsections.

NERVOUS DISEASES: THEIR DESCRIPTION AND TREATMENT. By ALLAN MCLANE HAMILTON, M.D., one of the Attending Physicians at the Epileptic and Paralytic Hospital, Blackwell's Island, New York City. With fifty-three illustrations. 8vo, pp. 512. Philadelphia: Henry C. Lea, 1878.

"IT has been my object to produce a concise, practical book; and should the satisfaction be ever accorded me of knowing that I have made the subjects of Diagnosis and Treatment of Nervous Diseases more simple to my readers than I think they now are, I will be amply rewarded for the task I have undertaken," says the preface. From a very careful examination of the whole work, we can justly say the author has not only clearly and fully treated of diagnosis and treatment, but, unlike most works of this class, it is very comprehensive in regard to etiology, and exposes the pathology of nervous diseases in the light of the very latest experiments and discoveries. Chap. I. treats of Diseases of the Cerebral Membranes; Chaps. II. to VII., Diseases of the Cerebrum and Cerebellum; Chaps. VII. to XII., Diseases of the Spinal Meninges and Cord; Chap. XII., of Bulbar Diseases; Chaps. XIII. and XIV., of Cerebro-Spinal Diseases; and the remaining four chapters expose Diseases of the Peripheral Nerves.

The introduction gives valuable hints on examination of patients, and on what is especially valuable to students and general practitioners, namely, post-mortem examination in cases of nervous disease. Lombard's and other complicated and expensive instruments are not recommended, except for experimental purposes, the author considering Seguin's surface thermometer (which is figured) amply sufficient. Sieveking's æthesiometer is preferred to all others, and a full table of æthesiometric distances is given. Beard and Rockwell's Eulenberg's piesmeter is recommended. Mathieu's and the author's dynamometer are illustrated, and the latter recommended on account of its simplicity and reliability. For office practice it is undoubtedly excellent, but not as portable as Mathieu's instrument. The dynamograph and myograph are described. Loring's ophthalmoscope is figured and recommended; that of Liebreich is considered "quite unreliable." Hutchinson's rules for ophthalmoscopy are laid down as a guide. The author says (p. 29): "I do not believe that it [the ophthalmoscope] possesses any positive value in the diagnosis of brain diseases, *except where the condition of the fundus is the result of an organic disease of the brain or cord*, or when it is possible to connect such disorders with errors in refraction." He makes reference to Dr. Hammond's remarks about pert pretenders, and justly shows their indelicacy, to say the least. Electric apparatus and other instruments are described, the author recommending his modification of Dr. J. J. Putnam's gas cautery. He condemns the use of the spinal ether spray in conjunction with gas or Paquelin's or like cauteries. Simple and chronic pachymeningitis are well illustrated by clinical cases. Hæmatoma of the Dura Mater is an exceedingly good article, clinically and pathologically. Acute tubercular (granular, as it is here called) meningitis is clearly and fully treated, the diagnosis being especially good. We agree that " . . . . the affection is usually associated with a scrofulous cachexia; that it appears among children who are badly nourished, and in whom the nervous diathesis is well developed."

He considers the apoplectiform variety of cerebral hyperæmia a hemorrhage generally. We must take exception to the view so *positively* stated in a note on page 71, preferring to consider disturbance of cell-function as the cause of the symptoms. The etiology and pathology of cerebral hyperæmia are unusually well stated. The treatment is most judicious, and diet is brought prominently forward. Cerebral Hemorrhage is the best article in the book, being quite exhaustive, occupying 29 pages. Sleep is considered dependent upon change in nerve-cell function, primarily, changes in the cerebral circulation being secondary thereto. Weir Mitchell's treatment is given under the head of cerebral anæmia. Auditory vertigo is well summed up; also cerebral embolism. We think the author has rendered students a great service in simplifying the classification of inflammations of the brain, and including them under the simple head of "Cerebral Softening." Apropos of aphasia (asemasia, as he prefers to call it), he very clearly states the relation of ideas and symbols; the whole article is excellent, and localization of brain-centres well illustrated by very fine wood-cuts and clinical cases. "Brain Tumors" is a very complete chapter (19 pages), and illustrated by eight excellent

wood-cuts. Spinal diseases are thoroughly considered. It is unfortunate that the misnomer, spinal irritation, was ever coined. It should be expunged from nosology, and substituted by some such name as sympathetic spinal neurosis, or the like. Our author does not consider it wholly dependent upon *anæmia spinalis*, but upon depressed function, in part, at least. We notice that no mention of phosphide of zinc, as recommended highly by Hammond and Flint, Sr., is made in the treatment of locomotor ataxia. Antero-lateral amyotrophic sclerosis, a rare disease, is prominently brought to view, aided materially by a very interesting case of Seeligmuller. Tetanus is very carefully treated, and the Long Island district is figured in map form.

The author's article on the treatment of epilepsy is worthy of the most careful perusal, as it is exceedingly judicious. He strengthens his position by some valuable tables, and his entire remarks must go far toward diminishing the routine treatment by large doses of the bromides to the exclusion of all other remedies. We must acknowledge our decided preference for glosso-labio-laryngeal paralysis to "bulbar paralysis," which Dr. H. borrows from French authors. This is *not* a *paralysis* of the medulla oblongata (*le bulbe*), but a lesion in that organ *causes* paralysis of the tongue, lips, and larnyx. We are not a little surprised to find no reference to Dr. J. Lewis Smith's elaborate article on cerebro-spinal fever in the *American Journal of the Medical Sciences*, Oct., 1873, pp. 313 *et seq.* Cerebro-spinal sclerosis, alcoholism, and hydrophobia (or, as the author prefers, rabies canina) are well considered; the McCormick case is fully given under the last heading, and the disease is considered as one of general blood-poisoning. Hysteria occupies fourteen pages, and is fully up to the standard, the author not believing that it is a form of insanity. Hystero-epilepsy is the same article as appeared, from the author's pen, in the *Amer. Jour. Med. Sci.*, Oct., 1877, pp. 448 *et seq.*, with the addition of a wood-cut. Curiously enough, he does not speak of its prognosis or treatment. There is a splendid chapter on chorea, in which he justly condemns the use of eserine. Dr. Yeo's case of exophthalmic goitre is illustrated.

Diseases of the peripheral nerves obtain due and satisfactory consideration; traumatic paralysis, tetany, reflex spasm, and professional cramp being especially noticed. Ninety-five formulæ, which is really an advantageous feature for students, follow, and the work is finished by a very full index. Synonyms and duration of each disease, reports of clinical cases, prominence of syphilis in its modifying influence upon nervous diseases, are other admirable features of this work. The author's style is concise and peculiarly clear, the language elegant, barring such an affectation as *ancient* cases (p. 247) and common expression as "stiff" dose (p. 439). Bouchut is spelled Bouchet in two or more places, Guersant as Guersent (p. 59), Carville as Carvaille, Küssmaul as Kausmall, etc., undoubtedly typographical errors, as well as Fig. 5, which is marked 7 in the wood-cut on page 97.

In two of the formulæ, chloroformæ should be chloroformi. Neurosis we have always considered as *essentially a functional* affection, and we must dissent from its use as a *synonym* of affection or disease, see pp. 223, 231, etc. Mrs. Jacobi, on page 239, might well be changed to the lady's more professional title. These are, of course, minor defects, but a work otherwise so excellent should be perfected in future editions, which we predict. The drawings are excellent, and well selected. After this careful revision we can heartily recommend this work to students and general practitioners in particular as being a full exposition of diseases of the nervous system, their pathology and treatment, to date, the equal of any and, in some respects, the peer of some, because of its concise comprehensiveness.

PROCEEDINGS OF THE FOURTH ANNUAL MEETING OF THE OREGON STATE MEDICAL SOCIETY. 1877.

THE two papers that will strike Eastern readers in this Pacific pamphlet of eighty pages will be Dr. W. B. Cardwell's carefully digested report on the "Medical Topography and Climatology of Oregon," which furnishes an excellent summary of facts drawn mainly from personal observation, and the "Report of Cases from St. Vincent's Hospital, Portland," by R. G. Rex, M.D., which affords a series of illustrations of the diseases of the Pacific coast. Of the 33 deaths enumerated in the report, phthisis was responsible for 8; typhoid fever for 4; pneumonia for only 1; cancer for 2, and diphtheria for 2. From Dr. Cardwell's report on climatology it appears that during the year 1877 the mean barometrical pressure was 30.04, with 30.65 as the highest, and 29.43 as the lowest term, 148 days of fair weather, 145 rainy days, and 70 days of weather described as cloudy. The mean temperature of the year was 50° F., with 51°, 64°, 52° and 40° as the mean spring, summer, autumn, and winter terms. The thermometerical range is from two or three degrees above zero to eighty-five. Humidity is not reported upon. The President of the Society, Dr. W. H. Watkins, opens the proceedings with an address on the "Origin of Disease," which is more positive in its adherence to the bacterial or germ theory than a cautious physician would care to be in these days of keen and rapid inquiry. This sense of security in relation to the operations of micrococci cells, ferment germs and such minute bodies, as accounting for all or most physical ills, would be very delightful, were it not for the rude shock of awakening that often follows the premature acceptance of an undemonstrated hypothesis. In reality, the bacterial theory of disease is losing ground with the best microscopic observers, and unless some remarkable discovery should result in giving it a new vitality, it must soon make way for a deeper and more enlightened view.

THE CURE OF RUPTURE, REDUCIBLE AND IRREDUCIBLE, also of Varicocele and Hydrocele, by New Methods. By GEORGE HEATON, M.D. Edited by J. Henry Davenport, A.M., M.D. Boston: H. O. Houghton & Co. 1877.

IN this little treatise the author has seen fit to give to the profession the method that he has for many years practised for the cure of hernia. After reviewing the various forms of "Abdominal Hernia," etiology, pathology, frequency, and diagnosis, he proceeds in the second chapter to the "Radical Cure of Reducible Hernia." This is produced by "tendinous irritation," the irritant material being a combination of the fluid and solid extracts of quercus albus, with a small amount of sulphate of morphine. The operation is performed with an instrument similar to the hypodermic syringe; the needle of this is passed into the inguinal canal, the cord and sac being avoided, and about ten minims of the irritant deposited near the internal ring; the sac is returned when possible, before operating, but its presence in the canal does not prevent a cure. If, through error, the irritant is deposited within the sac, no curative effects are to be expected. Immediately after operating a bandage is tightly applied with a compress over the inguinal canal. "Following the operation there occurs a dull local pain which, after

attaining a moderate degree of acuteness, gradually subsides and disappears altogether in from six to twelve hours." No further pain, swelling, redness, or increase of temperature follows. The patient is kept on his back for a week or so, when exercise is carefully resumed. Cloths wet with spirits and water control any excess of irritation, should it occur. The operation causes very little pain. Patients once operated upon have no fear of a repetition, should this be necessary.

Irreducible is claimed to be converted into reducible hernia by perseverance in taxis at several sittings. "The fore-finger invaginated in the scrotal tissues can frequently be insinuated within the inguinal canal, and then be slowly yet forcibly swept around the neck of the sac, thus effectually disengaging it and breaking up all attachments." Failing in this the author does not hesitate to cut down and dissect away the adhesions. Omentum which has become hardened is ligated and removed, experience having proven that when returned within the abdomen it acts as a foreign body. Varicocele is treated by the author by ligation of the veins at two or more points (subcutaneously) with silver wire, the latter left in the scrotum. Hydrocele is treated by introducing about two grains of red precipitate on a moistened probe through the canula after removing the liquid. Many cases are given upon which the author has operated for hernia. We hope to see the operation tested by others.

TRANSACTIONS OF THE INDIANA STATE MEDICAL SOCIETY, 1877. TWENTY-SEVENTH ANNUAL SESSION.

EXCLUSIVE of routine matter, the Transactions of the Indiana State Medical Society at the last annual session consist of thirteen papers, most of which are discursive dissertations on general questions, rather than practical additions to the literature of medicine. For example, Dr. J. W. Hervey, of Indianapolis, who has had considerable experience as a member of the State Board of Health, gives his views at length as to the best methods of securing medical legislation. Taking his own observation of thirty years' practice in the State, together with the information gathered from correspondence and from mortuary statistics, his conclusion is that twenty deaths in every hundred are in consequence of preventable causes, and that two thousand lives are sacrificed yearly in the State of Indiana to ignorance and ineptitude. He concludes with the suggestion, practicable everywhere, that the Society appoint a Standing Committee on the Public Health, and that the members and the profession at large be requested to report to that committee, on the occurrence of all epidemics during the year, the circumstances attending their appearance, the extent of their prevalence, and any modifying influences or other data that may appear to have part in determining them; the purpose being to amass accurate information respecting the influence of water-dams, stagnant streams, ponds, and pools, on the public health, and respecting the influence upon the same of drainage, cultivation of the soil, etc. The annual reports of the committee, while analyzing and classifying the facts furnished by correspondents, should, he thinks, discuss the remedial measures essential in the case, specify the amount required to put them in operation, and thus furnish the basis for an annual appeal by the Society to the Legislature of the State with a view to adequate statute provisions. Of course he has not forgotten the most essential feature of such a system, namely, the free distribution among the people of as many copies of the annual address of the Committee on Public Health as can be conveniently provided for. Dr. J. I. Rooker, of Noblesville, has a criticism on the indiscriminate use of hypodermic medication, which evinces a healthy reaction in the medical sentiment of the West, against the prevailing fashion of using the hypodermic syringe (with morphia) without due consideration of the possible consequences. A curious case of anencephalia is reported by B. J. How, M.D., of Orleans. The papers on the "Pathology and Treatment of Cancer," on "Goulon's Treatment of Colles' Fracture," and on the "Hereditary Transmission of Disease," discuss these topics rather generally, and from their literature, than in the manner of original investigation; and the same criticism is applicable to Dr. Hobbs' dissertation on medical testimony in courts of law, although it abounds in excellent suggestions, and is thoroughly intelligent as respects the latest aspects of medical jurisprudence. In his article on the "Therapeutic Properties of Opium," Dr. L. L. Todd, of Indianapolis, has a note on the use of the drug in cerebro-spinal meningitis, which condenses the testimony of experts on that question in a manner to make it of practical value to the profession, and to obviate the present necessity of collating from many volumes before forming an opinion.

THE PHYSICS OF THE INFECTIOUS DISEASES. By C. A. LOGAN, A.M., M.D. 12mo, cloth, pp. 212.

THE author spent, recently, four years upon the west coast of South America, in an official position, which afforded him exceptional facilities for study and research. This region is remarkably exempt from infectious diseases, and the author attributes this to its remarkable physical features, which he fully describes and discusses. Part I. treats of the infectious diseases, their history, classification and geography. Part II., of the physical aspects of the Pacific coast of South America, and contains a large amount of information heretofore inaccessible, such as the electric atmospheric changes due to earthquakes, etc. Part III., of the medical aspects of the Pacific coast of South America, with descriptions of its cities, prevalent diseases, etc., etc. Part IV., of the physics of specific causation, comprising a discussion of the bacterial and other hypotheses; and the development of a theory by the author, in the discussion of which the questions of energy in general, the vital energy, the construction and functions of the nervous system, etc., are considered in a thoroughly philosophical and very interesting manner. Part V., of the therapeutics of the infectious diseases, embracing suggestions as to treatment, founded upon the views of causation, laying special stress upon oxygen and ozone, as disinfectants and curative agents. Part VI., of the question of energy as related to general disorders of the nervous system, with suggestions as to general treatment.

We especially recommend this modest little volume to all who are interested rather in the *causes* of disease, and scientific treatment based thereon, than in mere empirical routinism. It is a handsomely printed and bound volume, which should be found in every physician's library.

ILLEGITIMATE CHILDREN IN BERLIN.—According to the figures of the City Bureau of Statistics, 5,987 illegitimate children were born in Berlin during the year 1877. Of the mothers, 1,565 were house-servants, 1,077 seamstresses, 1,104 workwomen, 318 widows, and 849 housekeepers; the remainder were teachers, shopgirls, singers, actresses, laundresses, etc.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, June 20, 1878.

DR. S. S. PURPLE, PRESIDENT, IN THE CHAIR.

THE MOST EFFECTUAL METHOD FOR CONTROLLING THE HIGH TEMPERATURE OCCURRING AFTER OVARIOTOMY.

DR. T. GAILLARD THOMAS read an interesting paper upon the above subject. He regarded the establishment of clinical thermometry as one of the most important advancements made in medicine in the nineteenth century. It was important with reference to diagnosis and prognosis, and not this merely, but the knowledge of the fact that high temperature killed the patient had led to devising methods for its reduction, the most valuable of which was refrigeration of the surface by water having a temperature several degrees lower than the temperature of the body. The author of the paper then reviewed the literature of his subject, and found that although Curry used, and in a well-written book recommended, the use of cold water to reduce the abnormal temperature of the human body, and was the first to place its use upon a scientific basis, the antipyretic influence of cold water when applied to the surface of the body was recognized by Celsus, who lived and wrote in the first century of the Christian era. With Curry originated clinical thermometry, and an instrument made and used in his day (now over 100 years old) was exhibited.

Dr. Thomas regarded cold water as the most valuable therapeutic agent that had been employed for the reduction of high temperature. His experience in the use of salicylic acid and large doses of quinine for that purpose had not been so gratifying as that related by many therapeutists, and had led him rather to sympathize with the revival and elaboration of the desultory efforts made to reduce high temperature in the days of Celsus.

Notwithstanding the demonstrated value of cold water as an antipyretic when applied to the surface of the body, the cold bath or the cold affusion was not generally resorted to, and the question arose, Why was general refrigeration of the surface of the body, by means of cold water, so little employed? The reason was to be found in the difficulties attending the application of the method. Sponging the surface of the body, however, with water was so uncertain and imperfect that it was not worth resorting to, and the cold pack of the hydropath soon amounted to fomentation; but they were the methods commonly substituted for the cold bath or the cold affusion.

HOW DOES MERE LOWERING THE TEMPERATURE SAVE LIFE WHILE THE DISORDER CREATING THE PYREXIA IS EXISTING?

The answer to the above question was given by illustration. For example: in *sunstroke* there were marked changes in the blood, and alterations in the sympathetic ganglia and in the vagi, and yet the high temperature of the condition was not the essential disease; it was merely one of the attendants which favored the changes in the organs and tissues of the body, such as contributed to a fatal issue.

In typhoid fever life was destroyed either from perforation of the intestine, hemorrhage, syncope, exhausting diarrhœa, etc., but by far the greatest number of deaths were effected through the agency of prolonged high temperature, which so disturbed vital action as to directly produce morbific changes in the blood and tissues favorable to a fatal issue. Reduction of high temperature, therefore, during the progress of any disease, disarmed it of one of its most formidable weapons, and by so much favored nature's effort to establish a recovery. All that had been said with reference to clinical thermometry, in connection with high temperature in any disease, was applicable to ovariotomy for the first two or three weeks after the operation.

DANGERS AFTER OVARIOTOMY.

The two greatest and most frequently destructive complications which arose after ovariotomy were peritonitis and septicæmia, both of which began their existence by rapid rise in temperature.

The *first* was liable to develop its existence within the twenty-four hours next succeeding the operation; the *second* generally developed between the fourth and fourteenth days.

The special object of the paper was to bring before the Academy the advisability of consulting the temperature and resorting to means for its control before the nervous centres were depreciated both in their function and force. To remove an ovariotomy patient from the bed to a bathing-tub was a procedure that was attended by very great risks. To obviate such danger, and yet give the patient the full advantage of refrigeration of the surface by the application of cold water, the author of the paper recommended the employment of what was known as

KIBBEE'S FEVER-COT.

The cot consists of a strong, elastic, cotton netting, manufactured for the purpose, through which water readily passes to the bottom below, which is of rubber cloth, so adjusted as to convey it to a vessel at the foot. When not in use it can be closely folded (see MEDICAL RECORD, vol. xii., p. 79). The method of management was the following: Place upon the cot a blanket or sheet two or three thicknesses, which is to cover the patient's hips, a portion of the trunk, and a portion of the thighs. The patient, transferred from the operating-table to the cot, is covered with folded blanket or sheet, which is kept constantly wet by pouring cold water upon it. The temperature should be taken every hour. In some instances the temperature had been reduced to 96° F., but it was readily restored by using warm instead of cold water. Bottles of warm water should be placed to the feet and hands. Taking the temperature every hour, the patient remained upon the cot as long as necessary, constantly enveloped in the wet sheet and constantly exposed to the influence of cold water. The urine was drawn with a catheter, and a bed-pan used, so that no necessity arose for changing the sheet or in any way disturbing the patient.

The aim should be to keep the temperature of the body at 100° F., or a little less. The water collected in the tub at the foot of the cot was usually 8° or 10° F. warmer than when poured from the pitcher. In one case the water was elevated in temperature 12° F. by passing over the patient's body. It was not expected, by the method of constantly keeping a portion of the body wet with cold water, to cure peritonitis or septicæmia, but the hope which Dr. Thomas had was to rob those diseases of one of their chief weapons—hyperpyrexia.

ILLUSTRATIVE CASES.

Dr. Thomas then gave the history of cases which illustrated the power cold water had for controlling the high temperature:

Case I. *Acute Peritonitis following Ovariotomy.*—The symptoms were rise in temperature (103° F.), acceleration of pulse (130), intense pain in the abdomen, and vomiting.

In this case it was demonstrated that too cold water was employed at first (50° F.); the effect upon the patient was too severe, and it was subsequently used much warmer than at the beginning. The pain was quieted by the hypodermic use of morphine. That acute peritonitis was progressing was shown by the discharge of pus from the abdominal incision, and at autopsy it was found that gangrene of the intestines had occurred; yet the temperature of the body was maintained at 100 and 101° F. during the entire progress of the case.

Case II.—In this case pleurisy and pneumonia were found at autopsy, and it was open to the suspicion that they were developed by the use of the cold-water affusions.

Dr. Thomas did not share in that opinion, however, and believed that the uniform capacity of refrigeration of the surface to control temperature was demonstrated.

Case III. *Acute Peritonitis following Ovariotomy.*—Water at a temperature of 70° or 75° F. was employed, and the affusions repeated nearly every hour. After ten affusions the pulse fell to 98, temperature to 100° F., at which point it was maintained, and the patient steadily progressed to recovery.

Case IV.—The third day after the operation the temperature began to rise. Water at 74° F. was employed, and after three affusions the pulse fell to 96, temperature to 100¾°, and from that point the patient went on to convalescence.

Case V.—The temperature rose to 105° F., pulse to 130 and 140. The patient was placed on the fever-cot, and water at 80° F. used. At the end of one hour and a quarter the temperature was reduced to 102° F., and the pulse to 118. Four more affusions, and the temperature was lowered to 100⅘°, and the pulse to 104. The cold affusions were kept up for about one week, and recovery took place.

Case VI. *Peritonitis following Use of Pessary.*—In this case Dr. Thomas was sure that opium alone would not have cured the patient. The opium was much more effectual when the temperature was reduced by the cold affusions.

Case VII.—The case had been operated upon in Owego, N. Y., and left in care of Dr. Ayer, whose patient she was. It was reported as a case illustrating the power which refrigeration of the surface had in *preventing the development of peritonitis.*

In concluding the paper, Dr. Thomas remarked, he did not claim that peritonitis and septicæmia after ovariotomy were absolutely checked, but simply that their course was robbed of much of its destructiveness by the use of cold affusion for controlling high temperature.

For sensitive persons it was well, perhaps, to begin with water at 98° F., and gradually reduce its temperature to 75 or 70° F., or lower if borne well and further reduction was necessary to control the temperature of the body. The Doctor was sure, in the light of his experience in the use of this means, that in the future cold affusion for reducing high temperature would earn the position of honor and trust from the ovariotomist.

Dr. Joseph W. Richards remarked that his father, who was a physician, read and recognized the great value of Curry's book as a literary production, yet he never put its doctrines into practical application. He belonged to that class of which Dr. Thomas had spoken, and of which there was such a large number, who were willing to acknowledge the great merit of cold water as a therapeutical agent for the reduction of high temperature, yet never resorted to its systematic application. As early as 1825, Dr. Richards, then a young practitioner, had treated the hot skin of scarlet fever (no thermometers in those days) by means of cold water applied from the ordinary garden sprinkling-pot, and with the most favorable results.

Early in his practice he resolved to treat the high temperature present in cases of what was then known as Cullen's cynochus, probably typhoid fever. An epidemic was prevailing, and his father not opposing him, he applied cold water to the surface of the bodies of his patients. He soon found that the application was grateful to the patients, and, without knowing anything about how it operated, or in what danger the molecules of the body were on account of high temperature, he continued to apply cold water to the surface of the body, "because the patients wanted it." His father had passed through several epidemics of the disease, and his remark was that he "had never passed through one so well as this," and yet it was one of full average severity.

He had also used cold water in the treatment of peritonitis. The method had been to wring towels from cold water, and apply them directly to the surface of the abdomen. The degree of cold could be very much increased by waving the towels in the air back and forth a few times. Dr. Richards thought that among all the cases which he had treated by means of the application of cold water to the surface of the body, lung trouble had been developed in one or two instances.

PORTRAIT OF THE LATE DR. EDMUND RANDOLPH PEASLEE.

The President, on behalf of the executor, presented to the Academy a portrait of the late Dr. Edmund Randolph Peaslee.

On motion, the portrait was accepted by the Academy, with thanks.

Dr. A. C. Post seconded the motion with appropriate remarks.

The Academy then adjourned, to meet in September.

Correspondence.

THE LOCAL ADMINISTRATION OF IODINE FOR SYPHILIS, ETC.

To the Editor of The Medical Record.

Sir:—On page 492 of your No. 398, occur some very valuable conclusions on the subject of syphilitic struma, from a paper read by Dr. H. R. Storer before the American Medical Association. The points that struma, the result of syphilis, is comparatively seldom recognized during life, that syphilis causes consumption, and that syphilis is never entirely eradicated from the individual, appear to me among the best made. But, while the radical cure of syphilis is in doubt, we have the power to relieve our patients, and prolong life.

It is for the purpose of bringing to your notice a useful method of administering iodine for tertiary

syphilis and syphilitic struma that I send these few lines. In very many cases I have found that the internal administration of the iodides produced such disagreeable symptoms that my patients quietly suspended the use of the mixtures. Having a case of tertiary orchitis, very sluggish in its course, I applied tincture of iodine to the scrotum. This benefited the condition of the testes, but caused so much irritation of the scrotum that the patient would not permit another application to that region. As he was disagreeably affected by the internal administration of the iodides, and the application of the tincture appeared to have acted more powerfully than a mere counter-irritant would have done, I concluded to apply tincture of iodine externally with a view to its absorption by the skin, and its constitutional effects. The result was highly satisfactory; no iodism was produced, excepting once, when a rather extensive application of the tincture produced some griping and a feeling of fulness about the head, and after two weeks' treatment the testes were free from pain and hardness. In several cases of struma I have applied the tincture of iodine with the effect of improving the appetite and the general health. I am satisfied that all the benefits of iodine may be obtained by this method. A camel's-hair pencil, charged with tincture of iodine, is wiped dry upon some portion of the chest or thighs three times daily, taking care not to paint any one spot often enough to blister or irritate it, unless counter-irritation is indicated. The last dose for each day should be applied at bed-time to the side upon which the patient sleeps, as pressure against the bed prevents the loss of the iodine by evaporation.

In rheumatism, and in any disease where iodine is of use, but where the drug in all of its forms disagrees with the patient on internal administration, it may be applied safely and beneficially by the method I have described.

A. A. HOEHLING, M.D., U. S. N.

LEAGUE ISLAND, PA., July 2, 1878.

New Instruments.

A NEW APPARATUS FOR ARRESTING URETHRAL HEMORRHAGE— WITH CASE.

By W. H. BATES, M.D.,

BROOKLYN, N. Y.

THE following is a description of a new apparatus I have had constructed for the purpose of arresting urethral hemorrhage, after operations. It consists of a thin soft rubber pouch, three-fourths of an inch wide, and eight inches long. The outer end has three openings (see wood-cut); two are furnished with stop-

cocks. The centre is traversed by a number five gum elastic catheter, the end of which, after piercing the lower extremity of the pouch, is fastened, and then cut off; over which part of a soft rubber catheter is passed and firmly secured. A stylet passes through the catheter, and renders introduction easy. The apparatus measures twenty-five millimetres in its flaccid state, and admits of any desired distention. It is used as follows: After the thorough division of the strictures, the instrument is introduced so that the end of the catheter rests in the bladder, or just outside, if preferred; the stylet is then withdrawn and a plug inserted in the end of the catheter. The instrument is then tied in. To the stopcock *b* is attached a fountain syringe (or tube to vessel containing ice-water); to the stopcock *c* is attached rubber tubing for the purpose of conducting the refuse water to a receptacle at the bedside. When all is ready the stopcock *b* is opened and the syringe raised to any desired height, in order to regulate the hydrostatic pressure. The stopcock *c* is opened to regulate the outflow of water. It may be allowed to escape rapidly or slowly, according to the object aimed at, either the lessening of inflammatory action, or the arrest of hemorrhage. The water may be injected with any ordinary syringe, and retained, if the object be simply to control hemorrhage by pressure. I have used it in this manner and find that it works well.

The advantages claimed for this apparatus are, that pressure and cold are applied from within the urethra, and all danger from hemorrhage after internal urethrotomy is obviated; also the danger of urinary infiltration lessened. The soft rubber pouch expanding in all directions fits into the incisions, and the parts are kept open until granulation of the wounds have begun; lessening the risk of recontraction from union of the incised tissue, and shortening the after-treatment. The apparatus may be retained as long as the surgeon thinks desirable, the patient passing his urine at will, through the catheter. I have had two sizes constructed, differing only in length, one for the deep urethra, and the other for the anterior portion. The accompanying wood-cut represents the long one.

The following case is interesting in connection, as showing the value of the apparatus: Thos. C., æt. 37 years; patient sent by Dr. F. H. Stuart. Has had difficult micturition for the past twelve years; neglected all treatment. On examination of the urethra, several strictures were found, one situated six inches from meatus urinarius, admitted with difficulty a small whalebone guide. I operated on the 26th of December last, the patient being etherized. I divided all the strictures. There was very little hemorrhage attending the operation. He was immediately placed in bed, with the cold-water coil applied to the penis, and below the scrotum. Slight hemorrhage occurred on urination, but ceased spontaneously. On the third day I introduced a full-sized instrument without hemorrhage. Some swelling of the perineum and scrotum took place, with a discharge of pus from the scrotum (from urinary infiltration). The opening healed readily in a few days. The sound was introduced every third day without difficulty, until the twelfth day, when, on its withdrawal, profuse hemorrhage immediately followed, which was, with the *greatest* difficulty, arrested; NO FORCE was used; the sound passed slowly, and by its own weight. After three days the hemorrhage entirely ceased; there was no oozing of bloody serum after urination, and none recurring for a week the patient was allowed to get up. Feeling well, the next day he went down-stairs to dinner; that evening, several hours after, he had a hemorrhage which was difficult to control. Hemor-

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rhage recurred every few days for FIVE WEEKS, resisting all efforts, both local and constitutional, to arrest it. The patient grew weaker and weaker, so that his life was despaired of. After everything had failed, even injections through a catheter of ferri persulphatis, the above described apparatus, which I had constructed, was used with the happiest effect. All hemorrhage was immediately and permanently arrested, and the patient made a good recovery and remains well.

After the first attack of hemorrhage, I learned that he was subject to profuse bleeding from slight causes. He has bled to syncope from the extraction of a tooth, and from epistaxis on several occasions.

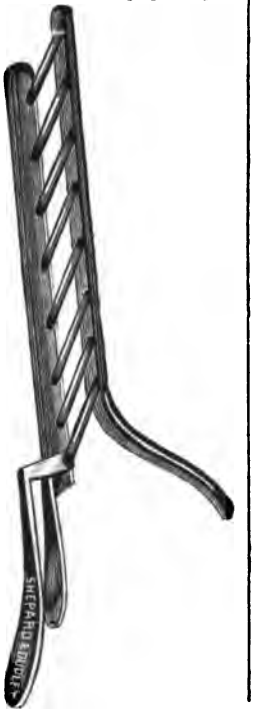
A RING-FOLDING SPECULUM.

By A. SHILAND, M.D.,

WEST TROY, N. Y.

DR. A. SHILAND, of West Troy, has devised a ring-

folding speculum, for which he claims many advantages. The following are extracts from a paper upon the subject read at a recent meeting of the Albany County Medical Society, N. Y.:



The blades are not one-third the width of the ordinary speculum. The series of rings acting with the blades prevent the vaginal walls from closing and obstructing the view, as in the case of the other forms now in use. This speculum is readily introduced, turned, or rotated, without causing pain, thus bringing all parts clearly in view and affording the greatest facility for making applications, using the probe or syringe, and removing unhealthy secretions. Its lightness, compactness, facility of introduction, and the complete view it affords of the vaginal walls and os uteri, are points in its favor which must be apparent.

The position of the patient most favorable for using this speculum, is lying on the back at the end of a lounge or table, having the legs flexed. The covering of a sheet protects the lady from exposure, as well in this position as any other. When the instrument is closed its small dimensions correspond with the closure of the labia in front. When introduced in the right direction and partially opened, the os will be in view. When entirely open it retains its position. If the os is not seen when the speculum is partially or entirely open, partially close, in order to turn or change the direction to bring it in view.

This speculum should not be closed forcibly, but gradually, and at the same time gently rotated. There is no pain caused in using it in this way, even in vaginitis. By shifting the position of the rings and withdrawing the speculum when partially closed, all parts may be examined and applications made.

It may be effectually cleaned with a brush and soap, or by burning a few drops of alcohol on it.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 21 to July 27, 1878.

SIMONS, JAS., Lieut. Col. and Surgeon. Granted leave of absence for twenty days. S. O., 157, A. G. O., July 20, 1878.

JANEWAY, J. H., Major and Surgeon. Granted leave of absence for three months. S. O., 160, A. G. O., July 24, 1878.

CALDWELL, D. G., Capt. and Asst. Surgeon. To report to Comdg. General, Dept. of the East, for assignment. S. O., 157, A. G. O., C. S. Assigned to duty as Post-Surgeon at Fort Independence, Mass. S. O., 128, Dept. of the East, July 24, 1878.

CRONKHITE, H. M., Capt. and Asst. Surgeon. To report to Comdg. General, Dept. of the East, for assignment. S. O., 160, C. S., A. G. O.

WILSON, W. J., Capt. and Asst. Surgeon. To report to Comdg. General, Dept. of the East, for assignment to duty. S. O., 160, C. S., A. G. O.

BIART, V., 1st Lieut. and Asst. Surgeon. To report to Comdg. General, Dept. of the Missouri, for assignment to duty. S. O., 160, C. S., A. G. O.

GRAY, WM. W., 1st Lieut. and Asst. Surgeon. Relieved from duty at Willet's Point, N. Y. H., and to report in person to Comdg. General, Dept. of the Columbia, for assignment to duty. S. O., 160, C. S., A. G. O.

BRECHEMIN, L., 1st Lieut. and Asst. Surgeon. To report to Comdg. General, Dept. of Dakota, for assignment to duty. S. O., 160, C. S., A. G. O.

LA GARDE, L. A., 1st Lieut. and Asst. Surgeon. To report to Comdg. General, Dept. of the East, for assignment to duty. S. O., 160, C. S., A. G. O.

PRIAPISM CURED BY LEECHES.—Dr. Neufeld, of Fordon, reports a case of very intense priapism, that resisted all the usual methods of treatment for three weeks, but finally yielded to leeches applied on the root of the penis and the perineum. The patient was a young man, twenty years of age, who had been scrofulous from his childhood, and at the time was suffering from decided leukæmia of the splenic type, a condition that would *a priori* seem to decidedly counterindicate bloodletting. The priapism did not return after the application of the leeches. The patient succumbed to the leukæmia a year and a half afterwards.—*Allg. Med. Cent.-Zeit.*, No. 38.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.—Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 27, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.
July 20, 1878....	0	8	51	1	9	19	0
July 27, 1878....	0	10	36	2	2	18	0

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE, WASHINGTON, D. C., July 27, 1878.

NATIONAL QUARANTINE REPORT.—Abstract of sanitary reports received during the past week under the National Quarantine Act:

New Orleans.—About the 12th inst., cases of yellow fever began to occur in New Orleans; at first they were at one focus of infection only, but others soon appeared at different points, and up to yesterday evening thirty-seven cases and seventeen deaths had been reported to the State Board of Health. So far, the Board have been unable to trace the outbreak to a foreign source. Carbolic acid disinfection is being vigorously carried out at all infected points, and the remarkable success which has attended the efforts of the Board in this direction in the past few years gives hope of preventing the outbreak from assuming epidemic proportions. Three or four persons from New Orleans have died of yellow fever at points above that place on the Mississippi.

Brooklyn.—No new cases at Navy Yard since last Saturday's report.

Key West.—From 10th inst. to noon to-day six new cases of yellow fever in the harbor, and three in the city, have occurred.

Havana.—During the week ending July 13th, there were ninety-seven deaths from yellow fever and twenty-two from small-pox.

Matanzas.—Advices to 19th show increased cases and increased ratio of deaths.

Japan.—Occasional cases of cholera during winter and spring, to June 19, 1878, at Yokohama and vicinity, show the poison of the disease has survived the winter. The epidemic of last September, October, and November extended to all parts of the empire, with a mortality of 7,967 out of a total of 18,710 cases, or 581 deaths to 1,000 cases. No means yet instituted in Japan to prevent importation of the disease from China, where it exists, and where the famine furnishes most favorable conditions for its reappearance in a more malignant form.*

Calcutta.—Twenty-two deaths from cholera during week ending May 25th.

Bombay.—Twenty-nine deaths from cholera during week ending May 28th.

Reports received from other places indicate good health.—JNO. M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

SUSPENSION BY ADHESIVE PLASTER IN THE PLASTER-OF-PARIS TREATMENT OF POTT'S DISEASE.—Dr. Jno. J. Reid, in the July number of the *N. Y. Medical Journal*, describes a method of suspension by adhesive plaster as a substitute for the ordinary apparatus used in the treatment of Pott's disease. It consists in applying the strips of adhesive plaster to either side of the body, binding them in position by a roller of soft gauze, which remains in position, and takes the place of the knitted shirt. The strips of adhesive plaster are subsequently removed by an ingenious device after the plaster has hardened.

Dr. Reid also describes a method of independent suspension of the head in order to avoid the possibility of injury to caries of cervical or upper dorsal vertebræ during extension.

A STRAWBERRY FUNGUS is said to have been discovered by Dr. Frank E. Beckwith, of this city. Microscopical examination revealed deficiency of coloring matter, and a little shrinking of the cells, with a loss of nuclei or nucleoli in the *berry;* brown granules replacing the chlorophyl, though not choking up the cells of the vessels, in the *stems;* loss of the central spaces of cells and vessels in the *fibrils;* everywhere a brown staining, with slight loss of cell contents. This atrophy is ascribed to the presence of a fungus, whose mycelium was found among the cells and in the intercellular spaces, undoubtedly living in and receiving its nourishment from the cell protoplasm, absorbing the cell contents and membrane, but not the cellulose wall, the latter being brown instead of pale. Only the mycelium and spore-bearers, no spores, were found in the specimens examined. This fungus belongs to the mucedines, a species of the *genus* peronospera. The disease may be called "brown parasitic atrophy," or "brown strawberry rust." This may turn out to be an important discovery, since the presence of the fungus may cause a very valuable industry to be seriously damaged, and means for prevention and cure must be sought at once. Whether light, heat, air, moisture, and soil are the prime factors, by lowering the vitality of the plant so as to furnish a favorable nidus for the fungus, or whether the fungus itself is the sole cause of this degeneration, is a question which must be settled by properly conducted experiments on the part of the practical cultivator.

FEVER IN ST. PETERSBURG.—Weekly mortality returns are now made from St. Petersburg, and present a terrible commentary upon the sanitary condition of that city. Taking the first thirteen weeks of the present year, 9,392 deaths are recorded. The population being 669,741, this is equal to an annual death-rate of 56.1 per 1,000 persons living, or considerably more than double the rate of mortality which prevailed during the same period in London. It appears that of these deaths no less than 3,761, or 40 per cent., resulted from the seven principal zymotic diseases, including 2,273 from fever, 979 from diarrhœa, 162 from diphtheria, 121 from scarlet fever, 115 from small-pox, 62 from measles, and 43 from whooping-cough. The annual death-rate from these zymotic diseases was equal to more than 22 per 1,000, while from scarlet fever alone it was 13.6. Of the 2,273 deaths referred to fever, 1,029 were enteric or typhoid, 739 typhus, and 505 "typhus recurrens." We are so accustomed to look upon an annual death-rate of 1 per 1,000 from fever in large towns as undoubted evidence of hygienic neglect, that it is difficult to realize what the sanitary condition of a city must be, which suffers from an annual death-rate of 13.6 per 1,000 from this cause. The fever rate at Liverpool in its worst days never exceeded 2 per 1,000.

* Dr. D. B. Simmons, Chairman Health Board, Yokohama, etc.

Original Lectures.

LECTURES ON THE LOCALIZATION OF SPINAL AND CEREBRAL DISEASES.*

By E. C. SEGUIN, M.D.,

CLINICAL PROFESSOR OF DISEASES OF THE MIND AND NERVOUS SYSTEM IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

LECTURE V.

SUMMARY:—LESIONS OF THE BASIS CEREBRI; PHYSIOLOGICAL ANATOMY OF THE PARTS INVOLVED. 1. LESIONS OF THE PONS VAROLII. 2. LESIONS OF THE CRURA CEREBRI. 3. LESIONS OF THE BASAL PARTS FORWARD OF THE CRURA; HEMIOPIA AND NEURO-RETINITIS.

GENTLEMEN:—Leaving the region of the medulla, we are brought to those numerous and important parts which constitute the encephalon. I purpose considering in some detail, in this and subsequent lectures, the localization of disease in the chief subdivisions of this mass, but in this lecture I can only enunciate some general pathological propositions relative to the encephalon as a whole, and study the lesions of one of its parts.

For our purpose I make the following subdivisions of the encephalon—a semi-physiological classification:

1. The basis cerebri, including all the parts which lie upon the base of the skull, but more especially the pons Varolii, crura cerebri, their attached nerves, and the optic and olfactory apparatuses.

2. The great basal ganglia; *i.e.*, the thalamus opticus, nucleus caudatus, nucleus lenticularis, and the corpus quadrigeminum.

3. The white substance of the hemispheres, especially the internal capsule.

4. The cortex cerebri.

5. The cerebellum.

The general pathological propositions relative to these parts are as follows:

1. Lesions of the basis cerebri, especially if involving the pons and crura, give rise to the following symptoms: paralysis (often of crossed variety), anæsthesia in the face and limbs, impairment of equilibrium, changes within the eyes; no psychical symptoms.

2. Lesions of the great basal ganglia probably produce no symptoms unless by encroaching upon the internal capsule which passes near them. An exception may be the nucleus caudatus.

3. Lesions of the white centre of the hemispheres produce no symptoms when they do not involve the parts composing the internal capsule; if the anterior portion of this capsule be injured, we observe paralysis, if its posterior part, anæsthesia.

4. Lesions of the cortex cerebri produce, when located anteriorly, psychical symptoms; when located in the median regions, paralysis of an imperfect kind, and when situated posteriorly, no symptoms at all (sensory symptoms in animals).

5. Lesions of the cerebellum produce no symptoms except by involving adjacent parts containing important motor and sensory tracts; thus giving rise to irregular paralyses, changes in the optic apparatus, symptoms of irritation of the vagus nerve, etc.

6. Lesions in one lateral half of any part of the encephalon produce motor and sensory symptoms in the side of the body opposite to the lesion. When the lesion is in one-half of the basis cerebri some symptoms (direct symptoms) are found in the side of the face and head corresponding to the lesion, others in the opposite half of the body (crossed paralysis).

7. Lesions in the median line cause symptoms to appear in both sides of the body.

8. Any intracranial lesion which acts in such a way as to increase the intracranial pressure may produce (in addition to other symptoms) the condition known as choked disk, or neuro-retinitis.

With these preliminary general statements, I pass to the study of the first of the subdivisions—the basis cerebri:

PHYSIOLOGICAL ANATOMY.

To be very logical, the medulla oblongata, pons, and crura should be grouped together under this denomination, but for clinical purposes I leave the medulla with the spinal cord, and add to the basis cerebri the parts which lie in front of the crura, viz., the optic tracts and nerves and the olfactory apparatus.

As heretofore, I assume that you are familiar with the descriptive anatomy of the parts; and what I wish you particularly to understand is the arrangement of sensory and motor tracts, of nerves, and of ganglia in the basis cerebri.

The projecting mass we call the pons is largely made up of numerous transverse nerve-fibres which connect it with the two halves of the cerebellum, and which are not, under our present knowledge, of special physiological or pathological importance. In the anterior (inferior) half of the pons, lying under these transverse fibres, and partly separated into bundles by them, we find the great motor or peduncular tract, the continuation upward of the anterior pyramids and of the central motor fasciculi of the medulla. This tract is easily seen with the naked eye, broken up into a number of smaller fasciculi by transverse fibres, and it can be traced upward a long distance. In the posterior (superior) region of the pons, under the floor of the fourth ventricle, near the median line, there is a lengthened mass of motor gray matter, whence arise the original fibres of the sixth, seventh, and motor root of the trigeminus nerves. Laterally, in the posterior part of the pons, are sensory tracts, some directly continuous with the brain above, others more particularly in relation with the sensory root of the trigeminus, which radiates to an immense extent up and down in the basis cerebri and below it.

In the crura cerebri we find substantially the same parts not covered over by transverse fibres. The anterior portion of the crura consists of the great motor or peduncular tract just issued above from the white matter and basal ganglia of the cerebrum. Posteriorly are sensory tracts and masses of gray matter in intimate relation with the thalamus opticus and corpus quadrigeminum. The final (upper) extremity of the elongated mass of gray matter giving rise to motor nerves is found here, posteriorly, just beneath the aqueduct of Sylvius, in the shape of the common nucleus of the third and fourth nerves. Let us finally bear in mind that the sixth, seventh, and fifth nerves are intimately connected with the pons Varolii; the third and fourth nerves, and the optic tracts are associated with the crura.

The posterior portions of the crura and pons constitute the greater part of what Meynert designates the *tegmentum cruris cerebri*, while their anterior parts contribute to form his *basis cruris cerebri*.

All these parts lie in the middle fossæ of the cra-

* Delivered at the College of Physicians and Surgeons during the months of December, 1877, and January, 1878.

nium, the chiasm of the optic nerve occupying their forward extremity. In the anterior fossæ we find only the olfactory commissures and ganglia, together with the under surface of the frontal lobes of the cerebrum.

As regards the physiology of these parts, the mesencephalon of some authors, we may sum it up as follows:

The anterior part of the crura, pons (apart from the superficial transverse fibres), and medulla oblongata, contains the chief motor tract connecting the superior centres with the spinal cord. This motor tract is made up of nerve fibres, which convey excitations chiefly in a centrifugal direction; many of them, derived from the motor regions of the cortex, constitute the anterior portion of the internal capsule, and then enter the crura, traverse the pons, go to make up the anterior pyramids of the medulla, partially and irregularly decussate at the pyramidal decussation, and finally are found in the postero-lateral and anterior columns of the spinal cord. This most important bundle of nerves may be designated the *direct cerebral motor tract.* Another portion of the anterior region of the mesencephalon is likewise motor in function, and is made up of bundles of fibres derived from the nucleus caudatus and nucleus lenticularis. These bundles can be traced downward into the middle regions of the medulla, but their connection with the spinal cord is yet uncertain. The posterior region of the pons and crura, composed largely of gray matter, is partly sensory and partly motor. It is motor only in so far as it includes the nuclei of origin of the upper cranial nerves, the seventh, sixth, motor root of fifth, the fourth and third. You will remember that the nuclei of these nerves are all to be found near the median line, underneath the floor of the fourth ventricle or its continuation, the aqueduct of Sylvius. The sensory parts of the mesencephalon embrace the regions lying external to these nerves, giving origin to the eighth and fifth pairs of nerves; the latter presenting an enormous expansion in its origin; its upper roots extending as high as the region of the corpus quadrigeminum, the lowest probably as far down as the upper part of the spinal cord.

The posterior regions of the mesencephalon, the *tegmentum cruris*, are the seat of the reflex actions of the most important character, and they probably serve also for the elaboration, if not perception of sensory impressions from the periphery. At the upper part of the medulla and the lower part of the pons in this region is a mass of gray matter which controls the vaso-motor phenomena throughout the body. It is highly probable that some severe convulsive manifestations, such as epileptic and tetanic seizures, are due to morbid processes in the posterior part of the pons and crura.

Finally, with respect to the physiology of the optic apparatus lying at the base of the brain, I will only say that I am disposed to accept the doctrine of semi-decussation of the optic tracts in the chiasm, and shall use this hypothesis in explanation of symptoms.

SYMPTOMS OF LESIONS OF THE BASIS CEREBRI.

Before taking up systematically the study of the semeiology of basal lesions, allow me to fully discuss one of the most frequent symptoms of all these lesions, viz., crossed paralysis. I wish to study crossed paralysis in general, previous to speaking of it under each heading of the remainder of this lecture, partly to impress you with its importance, and partly to avoid future digressions and repetitions. By crossed paralysis (*paralysie alterne* of the French) is meant a form of paralysis in which the symptoms immediately caused by a basal lesion are on one side of the face or head and on the same side as the lesion, while the bodily symptoms are on the opposite side of the median line, viz., on the side opposite the lesion. As thus enunciated, in principle, it is at once apparent that the phenomena of crossed paralysis may, according to the seat of a lesion at the base of the brain, involve, on the one hand, any one of the cranial nerves, and on the other the limbs of the opposite side. This conception is verified by clinical and post-mortem experience, cases of crossed paralysis of every possible variety being on record. The most striking and best known, however, are those presenting what I may be allowed to term the third nerve and body type, the trigeminus and body type, and the seventh nerve and body type. It is to the late Prof. Romberg, of Berlin, that we owe the exact definition and conception of the principle of crossed paralysis, while Prof. Gubler, of Paris, first made a thorough study of the seventh nerve and body type.

1. LESIONS OF THE PONS VAROLII.

Diffused lesions of the pons produce, when fully developed, partial anæsthesia and paresis on both sides of the face, generalized paralysis below the neck, with or without anæsthesia, the latter symptom appearing only if the deeper, posterior, portions of the organ are involved. We also observe inability to maintain equilibrium, without ataxia, sometimes convulsions, or contracted pupils, or neuro-retinitis. If the lesion advance forward beyond the pons, new symptoms, such as will be described further on, are superadded.

Localized lesions of the pons may occupy on either side of the median line one of four locations.

a. In the anterior portions of the pons forward of an imaginary transverse line passing through the origin of the trigemini. As shown by Gubler, this lesion does not produce crossed paralysis of the seventh nerve and body type, but both the face and body are paralyzed on the same side, *i.e.*, on the side opposite the lesion, just as in cerebral lesions, strictly speaking. A point for differential diagnosis is that when the cerebrum is injured, there is almost invariably conjugate deviation of the head and eyes toward the affected hemisphere; in pons lesions nothing of the kind occurs.

b. A lesion placed so as to injure the anterior (inferior) region of the pons on one side back of the imaginary line above mentioned, will cause typical crossed paralysis, *i.e.*, the facial nerve will be paralyzed on the same side as the lesion, and the extremities on the opposite side. For example, if the right face and the left arm and leg be palsied in a patient, we recognize crossed paralysis of the seventh nerve and body type, and may diagnosticate with positiveness a lesion placed as above described. There is, perhaps, no more positive example of constant relation of lesion to symptoms in the whole of nervous pathology.

In *a* and *b*, if the trunk of the trigeminus be involved in the disease, the face will be more or less anæsthetic and neuralgic on the same side as the facial palsy and the lesion. From a study of cases of these two kinds, Gubler drew the anatomical conclusion that the paths which connect the cerebrum with the nuclei of the seventh nerve decussate at about the middle of the pons, *i.e.*, some distance above the nuclei of these nerves. A useful diagram for studying the principle of crossed paralysis, and of this type in particular, you will find in Dr. Hammond's Treatise on Diseases of the Nervous System, ed. 1876, p. 99.

c. Lesions occupying the posterior region of the

pons above its middle. Besides paralysis of the face and body on the side opposite the lesion, we are likely to have anæsthesia of the paralyzed parts, even amounting to hemi-anæsthesia (without involvement of the special senses.) Other symptoms often produced are epileptic convulsions, impairment of sight from neuro-retinitis, and various forms of paralysis of ocular muscles.

d. Lesions in the posterior part of the pons, below the imaginary transverse line through its equator, may likewise, if extensive, without crossing the median line, cause hemi-anæsthesia of common sensory nerves, but will also produce crossed palsy, of face on same side as the lesion, of the body on the opposite side. As in *c*, we may have neuro-retinitis, epileptic seizures, with, besides, palsy of the sixth nerve, and bulbar symptoms if the lesion involve the medulla.

e. A lesion situated very laterally in the pons, or so placed as to irritate the lateral peduncles of the cerebellum, will (as shown by a number of cases) give rise to rotatory movements of the patient around the long axis of his body toward the side of the lesion. Of course this symptom appears with others, which are more or less in accord with the above symptom-groups.

2. LESIONS OF THE CRURA CEREBRI.

a. Lesions of the crus proper on one side of the median line. The symptoms of such a lesion are exceedingly definite, and might even be designated pathognomonic. The third nerve, its trunk or origin, is involved in the disease or compressed, as well as the great motor tract which, lower down, is to decussate. Consequently we observe a crossed paralysis of the third nerve and body type; *i. e.*, if the right motor oculi and the left extremities be paralyzed in a patient, we may feel sure that he has a lesion under or in the right crus cerebri. Prof. Rosenthal, of Vienna, states that in such cases the electro-muscular contractility (to faradism) is reduced in the paralyzed limbs, contrary to what obtains in hemispheric lesions. You will remember that the optic tract curves around the crus on either side, and it at times happens that symptoms characteristic of injury to one optic tract present themselves. These symptoms will be considered later.

b. Lesions deeply placed in the crus, on one side of the median line. In addition to the above described crossed paralysis, we shall probably observe hemi-anæsthesia of common sensation only on the side opposite the lesion. There may be convulsions, choreiform spasm, hemiopia, or neuro-retinitis.

c. Lesions placed in the median line, or involving both crura more or less. The symptoms will be, in case of lesion situated anteriorly (inferiorly), wholly motor, viz.: paralysis of both third nerves, and of both sides of the body below the neck. In case of lesion involving the tegmentum cruris, marked disorders of sensibility, neuro-retinitis, and convulsions will occur.

Extension of the disease backward to the pons will be characterized by symptoms (detailed in first paragraph) referable to the trigeminus and seventh nerves.

It has been stated that the bladder is paralyzed in severe lesions of the crura, but this lacks confirmation.

It might not be ill to add that patients having lesions in the locations defined above, do not present, strictly speaking, cerebral symptoms. They preserve their intellect, are not aphasic, and the special senses (except the sense of sight) are not involved.

3. LESIONS SITUATED AT THE BASE OF THE BRAIN ANTERIORLY TO THE CRURA.

These are rare, but give rise, when considerable, to noteworthy symptoms.

a. Lesions involving one of the optic tracts posterior to the chiasm. A small lesion in this location will produce hemiopia, a symptom of such importance and scientific interest as to require special mention. If the lesion extend, it may involve the chiasm of the optic nerves, or the tract of the opposite side, or the crura cerebri, thus either destroying the special symptom, hemiopia, or adding to it the signs of crossed paralysis of third nerve and body type.

By hemiopia is meant a condition of the organs of vision such that only one-half (vertically divided) of objects are seen by the patient. In other words, the fields of vision of the two eyes are darkened in one of their halves. Usually the vertical line of division between the lighted and darkened half-fields is exactly in the centre of vision. The hemiopia affects the two eyes always, and is distributed differently in each eye under the determining influence of the exact location of lesions about the optic tracts and chiasm. The immediate cause of hemiopia is interruption in the centripetal conducting power of certain bundles of nerve-fibres in the optic nerves and tracts; hence it has been found necessary to frame a theory of the course of fibres in the optic apparatus. The hypothesis of Wollaston, that of semi-decussation, is the one which is generally adopted to-day, and I append a diagram illustrating it, and the positions of lesions producing the varieties of hemiopia. A satisfactory anatomical demonstration of the truth of the theory of semi-decussation has not yet been given, and some few facts and authorities are opposed to it, but I think that I can assure you that in the present state of science it is the one which best serves the purposes of the physiologist and the clinical observer.

According to this hypothesis nerve-fibres derived from the deep origins of one (the left) optic tract, combine to form that bundle and extend undivided as far as the chiasm. As shown in Fig. 6 at the chiasm some of the fibres of the tract (the external group possibly) pass directly into the external portions of the left optic nerve, and are distributed to the external (temporal) half of the left retina. The remaining nerve-fibres of the left optic tract cross the median line in the middle of the chiasm, decussating with the similar fibres derived from the right tract, then enter the right optic nerve, and are distributed to the inner (nasal) half of the right eye. Thus it is seen that the nasal half of the right eye and the temporal half of the left eye are anatomically and physiologically homologous.

The same explanation applies to the course of fibres which form the right optic tract. Besides these main bundles of fibres, a few filaments are supposed to connect the two retinæ, passing through the optic nerves and the anterior border of the chiasm without decussation, while others connect the two sets of tubercula quadrigemina by way of the optic tracts and the posterior border of the chiasm. These commissural fibres may, however, be left out of consideration in the study of hemiopia.

If now we bear in mind this distribution of fibres in the optic apparatus we can by the aid of Fig. 6 demonstrate the mechanism of each of the four forms of hemiopia, viz.: right and left lateral hemiopia (shaded parts A and B), bi-temporal and nasal hemiopia.

Lateral hemiopia, *i.e.*, that form of hemiopia in which the homologous parts of the two eyes (temporal

half of the left retina and the nasal half of the right) lose their function, is invariably produced by a lesion de-troying one optic tract—the left in the diagram. *Vice versa*, destruction of any part of the right optic

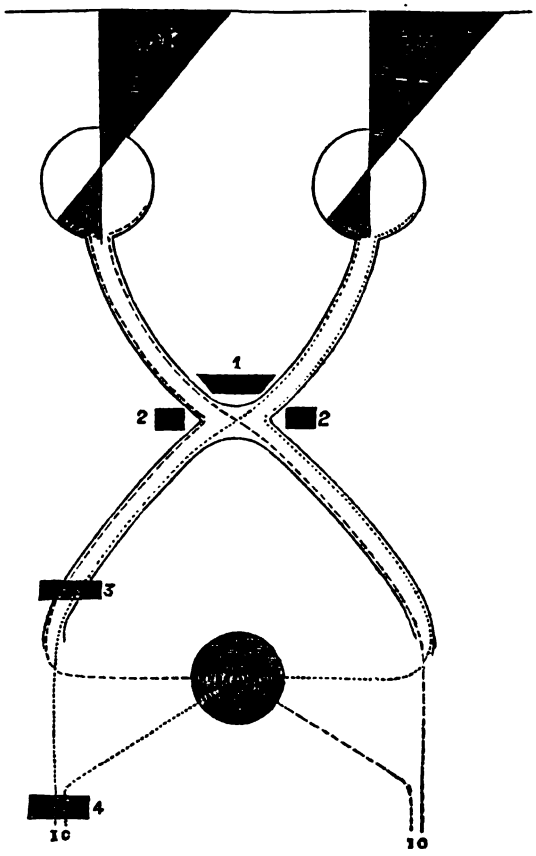


FIG. 6.—Diagram explicative of hemiopia. The shaded intra- and extra-ocular parts, A and B, indicate the obscuration in right lateral (or homonymous) hemiopia, as caused by lesion 3, so placed as to destroy one optic tract. In that tract are two sets of nerve fibres, one represented by a dotted line supplying the nasal half of right retina, the other fibres by a broken line supplying the outer or temporal half of the left eye. As visual lines cross in the eye the obscuration of the half-fields is the opposite. Lesion No. 1, anterior to chiasm, produces blindness of inner half of each retina, and consequently bi-temporal hemiopia. Lesions No. 2, pressing upon the sides of the chiasm, injure fibres supplying the temporal half of each retina, and cause bi-nasal hemiopia. C. Q, corpus quadrigeminum, in which Prof. Charcot believes a second partial decussation takes place. I C. Internal capsule containing, on Charcot's hypothesis, all the fibres coming from the eye of the opposite side. 4. Lesion of internal capsule injuring all the fibres connected with the right retina, and causing amblyopia of the right eye.

tract would cause blindness in the temporal half of the right retina and in the nasal half of the left. Inasmuch as all visual rays cross in the eye owing to refraction in the lens, the hemiopia, *i.e.*, the obscuration of the half-fields of vision is on the opposite side from the blind half-retinæ. For example, in the first instance described above, and illustrated in the diagram, the hemiopia is of the form designated right lateral (or homonymous) hemiopia, and is produced by a lesion involving the left tractus opticus.

Binocular temporal hemiopia can be caused only by a lesion placed (as 1 in Fig. 6) in front of the chiasm, cutting off the fibres which supply the two nasal fields.

Binocular nasal hemiopia is produced by a double lesion compressing or destroying the outer parts of the chiasm (2 in Fig. 6), which are imbedded fibres supplying the temporal halves of both retinæ. Prof. Knapp, of New York, has placed a remarkable case of this kind on record, in which the lesion consisted of thickened and enlarged internal carotid arteries. I need hardly add that lesions involving one optic nerve in front of the chiasm cannot give rise to hemiopia; they produce monocular loss of vision.

It should not be forgotten that lesions lying in front of the crura and behind the chiasm may press upon the motor nerves of the eye as they traverse the middle fossæ of the cranium on their way to the sphenoidal fissure, thus producing a variety of paralytic symptoms about one or both eyes.

b. Lesions in the anterior cranial fossa, anterior to the chiasma. When unilateral, such a lesion involves the olfactory tract and ganglion, thereby producing anosmia, or loss of smell, on the same side as the lesion, with or without subjective odors.

If the lesion be large, it may act upon the nucleus caudatus or other motor parts of the encephalon, and cause common hemiplegia (face and limbs) on the opposite side. Thus we may have a last form of crossed paralysis, of the olfactory nerve and body type. With a lesion involving both sides of the median line, complete double anosmia, with or without generalized paresis of the extremities, would be met with.

There is one more symptom common to all lesions of the basis cerebri, but produced also at times by any intracranial disease which causes pressure. I mean neuro-retinitis or choked disks. This is always (?) bilateral, though it may be more marked in one eye, and is esteemed one of the most important signs of gross encephalic disease, especially of tumors. In neuro-retinitis, ophthalmoscopic examination shows that the optic nerves are swollen, and they may project considerably (measurably) above the level of the surrounding retina; the margin of the disk is obscured or wholly lost, and no line of demarcation can be made out between the nerve and the retina. The blood-vessels present striking anomalies, the arteries being relatively small, the veins positively enlarged and tortuous; there are often small hemorrhages in the retina, round about the disk. Strange to say, very good sight may coexist with this lesion. This condition of choked disks may last a number of weeks (much longer in cases of tumor of the brain), and then subside, giving place to the appearances of atrophy of the optic nerves, viz., an unnatural whiteness or bluish whiteness of the disk, smallness of the retinal vessels, and unusual sharpness of the outline of the disk, with impaired vision.

CLINICAL LECTURE,

DELIVERED AT THE UNIVERSITY HOSPITAL.

BY WM. PEPPER, A.M., M.D.,

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(Reported for THE MEDICAL RECORD.)

I. *Sciatica.*

II. *Post-Pharyngeal Abscess.*

III. *Thickening of the Coats of the Colon.*

SCIATICA.

THIS disease is, as you all know, one of the forms of neuralgia. I have always doubted the propriety of considering neuralgia as a purely nervous disease. The more we study the phenomena of disease the less inclined we are to believe in the existence of special diseases. As an illustration of this point I have the following history to present to you:

A. W., a robust sailor, always enjoyed good health until last summer, when he was sick for a space of six weeks or more. The principal symptoms of his attack were pain in the neighborhood of the sacrum and in the hip behind the head of the thigh bone, thence radiating all the way down to the ankle. The pain was paroxysmal in its nature, and was always worse at night. Cramps and twitchings of the muscles of the calves of the leg were frequent. These symptoms were particularly marked in the right leg, the right foot at times feeling numb and dead. There was no swelling of his feet at any time. The right leg was not as strong as the left.

The above case is evidently one of sciatica, an affection of the largest nerve-trunk of the body. The symptoms of sciatica come on sometimes suddenly and at other times very slowly, beginning so gradually that the earlier stages are very often entirely overlooked. The spot at which the pain begins depends upon the point of involvement of the muscle. The pain may, in some instances, extend all the way up the leg to the crest of the ilium, thus involving the branches of the sciatic nerve. This pain is scarcely ever continuous, but comes on in paroxysms after longer or shorter intervals, as the case may be. Very often the least motion of the body will serve to bring on an attack. If you touch the patient he will cry out in agony. Changes of weather are believed to produce paroxysms of pain. In still other cases the pain is periodic, and will differ in extent upon different occasions. As a general thing it is localized high up, and radiates down the branches of the main trunk. The sensations of the affected part are perverted, with numbness and tingling of the flesh. Occasionally the sensory function is permanently impaired. Again, there may be distinct loss of power. If this symptom does not exist at first the patient gradually finds it out.

Another prominent symptom is spasm, which usually affects the calf and extensor muscles of the leg and thigh. The leg is often rendered very sensitive to cold. The nutrition of the muscles is destroyed, and they waste away. There is generally pain and tenderness at some one or more points over the course of the nerve-trunk. The two points where the pain is most generally localized are at the sacro-sciatic notch and just behind the head of the femur. Sciatica is, as you may suppose, a very crippling and agonizing disease.

Among the causes of sciatica may be enumerated all the influences which combine to produce neuralgic affections. A very frequent cause is a chronic malaria, which is very likely to affect all the nerves of the body. In other instances the origin of the symptoms would seem to have been associated with the absorption of lead, copper, or mercury in some of their various forms. In chronic lead poisoning there is generally a neuralgia of almost all the nerves of the body. A third cause is inflammation of the sheath of the nerve, which becomes thickened, and so compresses the nerve-fibres. Rheumatism very often acts in this way, a rheumatic inflammation of the nerve-sheath or nerve-substance standing at the root of a great many cases of the most obstinate and painful sciatica.

In this case there is very decided inflammation of the fibrinous sheath of the nerve on the right side. The sheath and cellular tissue are both pinched, rendering the parts very painful and tender to the touch. The sensory branches, when pressed, give rise to the tingling. The gravity of the symptoms will, of course, depend upon the extent of the inflammation. If there is any neuritis, the loss of power and sensibility will of course be greater.

Finally, as regards treatment, in a case of chronic malaria with chills and fever followed by neuralgia, the best treatment would undoubtedly be by quinia, iron, arsenic, and belladonna. In many cases I have found that more relief was afforded by large doses of arsenic than by any other remedy. Occasionally I have injected the arsenic under the skin. If the sciatica be the result of lead poisoning the appropriate treatment for that condition should be pursued.

When there is distinct local inflammation I am accustomed to treat the disease with large doses of iodide of potassium and minute doses of the bichloride of mercury. As there is not much pressure exerted upon the nerve-trunks in this case, the iodide of potassium will suffice. If we desire to cause absorption of inflammatory matters inside the sheath, the best way to do so is by means of severe blistering or by the use of the actual cautery. The actual cautery, in particular, has great absorbent action, and powerfully relieves over-sensibility of the nerves. In this present instance I have been using the actual cautery with the greatest success at the points where the pain has been most marked. Another excellent treatment is by hypodermic injections of morphia and atropia right down into the adjacent muscular structures. For this purpose we are in the habit of using here from one-sixth to one-fourth of a grain of morphia and from one-ninetieth to one-sixtieth of a grain of atropia. In employing this formula you must be careful as the disease subsides that the opium habit is broken. Indeed, the formation of such a habit should be guarded against by intermitting the treatment from time to time. In still other cases, again, where the localized pain has been intense, I have derived most excellent results from the hypodermic injection of from eight to twelve minims of chloroform, taking great care to keep the needle out of the way of the arteries. Though incomparable as a temporary destroyer of pain, the effects of the chloroform are not very permanent. Before leaving the subject I may refer to the use of electricity in these cases. Galvanism is very quick in some instances to relieve pain. The mode of application should be with the positive pole at the seat of the pain and the negative pole along the nerve-trunk. Where the muscles have wasted to any great extent the faradic current is the best. By some of the above-mentioned agents you will generally be able to cut short the course of the disease.

POST-PHARYNGEAL ABSCESS.

This young man has been very ill, indeed, but is at last making a satisfactory recovery. Post-pharyngeal abscess is a collection of pus behind the posterior wall of the pharynx and in the adjacent cellular tissue. The disease is by far most frequent in children. The abscess may form in any part of the posterior wall of the pharynx, but it generally will be found in the cervical region. Here it is very near the body of the second dorsal vertebra. Upon examining the man's throat, although the acute symptoms have all passed away, you will notice a very marked bulging of the mucous membrane. If this obstruction is high up it is very likely to impede respiration, while if it exists at about the level of the hyoid bone both breathing and swallowing will be interfered with. If its site be behind the larynx the dyspnœa will be most terrible, and nothing but liquid food can be swallowed.

The causes of this affection are numerous. It very often makes its appearance in strumous children, without any apparent cause. The symptoms very closely simulate those of croup, and the presence of the ab-

scess is altogether overlooked. Occasionally post-pharyngeal abscess follows scarlet fever or acute angina. In other instances it is connected with caries of the vertebræ.

This patient is a miner and 22 years of age. Ever since his sixteenth year he has suffered from the formation and falling of thick, hard crusts from the posterior nares. Fourteen weeks ago he had a sharp pain in his head, followed, in the course of several weeks, by marked stiffness of the neck. Four weeks ago he had considerable pain in swallowing and in the right side of his head. All these symptoms have plainly been those of chronic post-nasal catarrh. As the case increased in severity, and the abscess began to form, persistent headache came on and inability to turn the neck, the swelling in the left carotid region forming a hard mass. The difficulty in swallowing increased until the patient could swallow nothing but liquids.

In acute cases of this disease there is usually fever, dyspnœa, and rigidity of the neck. Very often there is fulness behind one or other angle of the jaw and great difficulty in swallowing. In this instance I found the arches of the fauces entirely filled up by a rounded lump. The skin was drawn so tense over this swelling that it was hard to distinguish any fluctuation at all.

As concerns treatment, the only thing to be done, of course, and what was done in this case, is to evacuate the abscess at once by means of a free incision through the wall of the pharynx. In making this incision be sure to protect all parts of the bistoury but its cutting point. The incision will be followed by a gush of pus, and the distressing symptoms will be at once relieved.

With regard to the cause of the attack in this case, it has been somewhat difficult to reach any positive conclusion. It was most probably due to the ulcerative disease in the post nasal space—some deep-seated ulceration of the mucous membrane or bone. I was fearful lest the case should be one of incipient caries of the cervical vertebræ. Since the man came first into the wards he has improved very markedly. The swelling has disappeared with the greatest rapidity, and the stiffness is fast going away. In two weeks he has gained fifteen pounds and a half in weight. In two days out of the fifteen he gained flesh at the rate of three pounds daily. The abscess is still discharging, the cut slowly healing. There is still some sense of fulness over the posterior wall of the pharnyx. I hope we shall soon be able to send the man away entirely cured.

THICKENING OF THE COATS OF THE COLON.

The patient is a sea-captain, thirty years of age, and was admitted to the hospital four days ago. Many years since he had a severe attack of small-pox, the marks of which he bears. From the time of that attack until four years ago he enjoyed perfect health. In the summer of 1874 he had a sudden attack of very violent pain in the left groin. This attack was followed in successive summers by four others of the same kind, all in the same place. The pain did not extend to the genital organs, and there was no desire to pass water, although the patient tells me that after one of these attacks the urine was a little bloody. (His urine at present throws down no blood or pus.) The above-mentioned attack lasted from four to five weeks. During these spells the pain was sometimes high up and sometimes low down. At times he vomited considerably. Though purgative medicines acted freely they did not relieve his pain.

He had a very typical attack last summer, the symptoms of which were accurately noted. There was at first a little looseness of the bowels. Then in the course of a day or two there was severe pain in the left iliac fossa, which increased in severity until the belly began to swell up, and obstinate constipation came on. His bowels seemed to be all in ridges, and the whole abdomen was intensely tender. On the sixth day of the attack he began to improve. There always remained a certain amount of soreness after the attack. He never had jaundice after any of these seizures. He has never been entirely well since the first attack.

I have been very much puzzled to account satisfactorily for all the symptoms presented. I could not, from certain signs, consider the case as one of abdominal colic, nor were the symptoms due to the passage of a biliary or renal calculus. The pain in these latter affections is never localized, as in this case. In renal calculus there is pain in the end of the penis and retraction of the testicles. Hepatic colic is always followed by the presence of bile in the urine and by clay-colored stools. The local tenderness, the persistence of the symptoms, and the disturbance of the bowels, all pointed, however, towards some inflammatory condition. I think that the only explanation of the case which can be given is that the attacks began with inflammation of the lining membrane of the bowels, which extended thence to the peritoneum, paralyzing the muscles of the intestines, and so causing costiveness. The belly was rendered tense, and vomiting persisted until the local peritonitis subsided. Local entero-peritonitis is the only name I can give to the attack. Such attacks are very common on the right side, and when occurring there go by the name of typhlitis or perityphlitis. This disease is followed by just the same symptoms. These attacks in the neighborhood of the sigmoid flexure are very rare. I cannot possibly explain their origin except as the result of continued exposure to cold and damp and vicissitudes of weather.

Upon making a careful examination I find a great deal of soreness, fulness, and resistance over the left iliac fossa. The right iliac fossa is entirely natural. The man has no difficulty in defecating at present, but the lumps are hard and about the size of a walnut. If the fæces are so large, there cannot certainly be any stricture of the bowel—the calibre of the gut is preserved. In a case of stricture the fæcal mass is wire drawn in its passage through the stricture.

I am going to pass in a rectal bougie to see that there is no obstruction. I want to impress upon you the fact that direct rectal examination is not resorted to nearly as often as it should be in these cases. Among the other conditions which call for direct examination are frequent stools with slime and pus or blood in them. I begin first by a digital examination, passing in my finger as far as possible. I find the lower bowel entirely empty, and exploration with my finger gives but little pain. There is a little thickening of its wall on the left side of the descending colon. There is also some thickening of the coats of the rectum.

I shall now pass in a bougie very carefully. There is evidently a great deal of thickening and muscular hypertrophy. Be very careful in such cases that you do not press too strongly against the sacrum or you may rupture the bowel. I cannot find any actual spot of obstruction. There is merely some extensive thickening, and nothing else.

After the patient has been taken back to the ward I will order him an injection by the "Simon gravity method." I will, in this way, determine by the amount

of water which the bowel holds whether there be any obstruction higher up in the intestine.

I can only attribute the periodicity of the attacks to the general character of the weather at the time of seizure.

The treatment must be by injections of astringent solutions and by counter-irritation to the left iliac fossa to promote absorption. I will put the patient upon a prolonged course of nitrate of silver and iodide of potassium. He must take small doses of the nitrate of silver daily until he has ingested thirty grains. Then leave off the silver and take the iodide of potassium for a certain time and then the silver again, and so on.

Reports of Hospitals.

BELLEVUE HOSPITAL.

Service of Dr. J. W. S. Gouley.

CYSTITIS ARISING FROM GONORRHŒA.

The patient was a lad only seventeen years of age, who was suffering from a well-marked attack of acute gonorrhœal cystitis. In consequence of the irritation to the bladder, he was obliged to pass his water every fifteen minutes.

Dr. Gouley regards this as a very troublesome affection, and one which is apt to last from three to six months. Some of the French surgeons, he said, were in the habit of treating it by injecting five or ten minims of a solution of nitrate of silver (thirty or forty grains to the ounce), from time to time, into the bladder; but personally he preferred the internal treatment by means of diluents and balsamics. In addition, he thought it was well to give belladonna, if the drug was well borne, and advised to commence with about a quarter of a grain three times a day. In some cases even smaller doses than that, he remarked, sent the pulse up to 120, and produced the most uncomfortable symptoms, while other patients could take from two to five grains a day with impunity. In some instances he was in the habit of combining the aqueous extract of opium with the belladonna (a grain of the one to a quarter of a grain of the other), and sometimes he found that rectal suppositories containing these ingredients acted very nicely.

ACUTE NON-SPECIFIC URETHRITIS.

The patient was an old man, who had formerly had gonorrhœa, but had not recently exposed himself to the risk of getting it again. Yet he had a copious purulent discharge from the urethra. It was probably due to the catheterism, which had been found necessary in order to accomplish the free dilatation of a stricture of long standing which he had, and Dr. Gouley stated that he had sometimes seen these urethral discharges in old men who had never had gonorrhœa at all, but were troubled with some chronic affection of the urethra or prostate. One gentleman that he knew, who had been obliged to catheterize himself for years, had a constant purulent discharge, almost the entire length of the urethra being the seat of undilatable stricture. In the present case he recommended rest and the administration of citrate of potassium (thirty grains three times a day).

RETENTION OF URINE FROM STRICTURE—ASPIRATION.

The next patient seen was one who had been brought into the hospital the evening previous suffering from retention of urine.

The house-surgeon, after a number of attempts, having failed to catheterize him, had performed pneumatic aspiration.

The puncture was made just over the pubis, and twenty ounces of urine were thus withdrawn. Dr. Gouley said that sometimes he had performed aspiration in this manner for two or three days at a time, in order to give the urethra complete rest, and at the end of this period it was usually found that the condition of the existing stricture had markedly improved.

But, he then went on to say, it was only very rarely indeed that he had been obliged to resort to aspiration; because, even in the most difficult cases, he was almost uniformly successful in getting into the bladder by way of the urethra.

After ascertaining that the patient was thirty-three years old, that he had had gonorrhœa six or seven times, and that he had suffered from a stricture for fourteen or fifteen years, Dr. Gouley proceeded to make the attempt to catheterize him. It was found that the glans was markedly indurated, and that the meatus was small and situated very high up, so that it presented a good case for free division in a downward direction. When a small sound was passed as far as the point of stricture, it was ascertained that the urethra was unusually sensitive. The stricture was located about five and a half inches from the meatus, and as the penis was of a pretty large size, it was supposed to be somewhere in the anterior part of the bulb. The instrument employed was a No. 3 bougie, with the extremity bent in the manner advised by Benjamin Bell, and it was found that the stricture was a very narrow one. The next step was to pass a filamentous whalebone guide through the stricture into the bladder, and then inject the urethra full of oil. This procedure caused the patient great discomfort, and Dr. Gouley remarked that the air injected along with it gave him more pain than the oil did. The stricture seemed to be very much twisted, but without much difficulty he succeeded in passing a No. 6 metallic tunnelled sound along the guide into the bladder. Then, withdrawing that, he introduced a No. 7 in the same manner. To demonstrate that he had really succeeded in getting into the bladder at this point, he passed a catheter through the stricture, which was now sufficiently dilated for the purpose, and drew off a considerable quantity of urine. Dr. Gouley here remarked that if he had seen the patient the night before, he would not have found it necessary to employ the aspirator in order to empty the bladder. The great secret of his success in these cases he considered to be the injecting of the oil into the urethra before attempting to pass the catheter, and he felt quite sure that if he had not made use of this preliminary procedure here, he would have failed to catheterize the patient, as the house-surgeon had done, and in like manner would have been obliged to resort to aspiration.

While the catheter was being passed, Dr. Gouley had not disturbed the filamentous whalebone bougie previously introduced; and, still leaving it in position in the urethra, he now proceeded to pass in succession a No. 7, a No. 8, and a No. 9 untunnelled metallic sound. With the last instrument he withdrew the whalebone guide, the extremity of which still preserved the bend of Benjamin Bell, which had been given to it before its introduction. In order to have such a bend preserved permanently in the guide, Dr. Gouley is in the habit of resorting to a process of

"tempering." This consists of dipping the instrument first into a vessel containing melted lard (say, at a temperature of 200 degrees), and then into ice-water. He preferred to postpone any further divulsion in this case until the meatus had been sufficiently enlarged by an incision (which he did not deem advisable to make on the present occasion), and remarked in leaving the patient that he did not think he would have to have his bladder aspirated again.

PERINEAL FISTULE SUCCESSFULLY TREATED BY FREE DILATATION OF AN EXISTING STRICTURE.

Dr. Gouley stated in connection with this case, that if he had not succeeded in curing it by the above method, he would have resorted to the plan recently adopted and practised with very satisfactory results by some of the French surgeons. This consists simply of keeping up firm pressure with the finger, placed either in the rectum or at the point of the internal orifice of the fistula, every time that the patient urinates, in order that all the urine may pass through the urethra, and none be allowed to escape into the fistulous tract. In this manner the latter is given an opportunity of healing up by granulation, without having the process interfered with by the passage of urine over its surface.

UNUSUAL INDURATION OF THE URETHRA.

This patient was a very old man, who had a stricture of moderate tightness in the bulbous portion. The noteworthy point about the case, however, was that the urethra was exceedingly dense for about an inch and a half of its course, commencing at the meatus.

On account of the feebleness and great age of the patient, Dr. Gouley was entirely unwilling to venture to do any cutting, and he was therefore obliged to content himself with attempting such gradual dilatation as was possible. On trying to introduce a No. 9 sound into the bladder, however, he found that it was so tightly grasped near the meatus that he could not even get the point of the instrument through the deep-seated stricture without resorting to such force as he considered unjustifiable under the circumstances. In such cases, he said, the attempt to persist with a large sound very frequently results in making a false passage. Consequently, on the principle that "half a loaf is better than none," he was quite willing to remain satisfied with passing a No. 7 or 8 bougie.

AMPUTATION OF THE PENIS FOR EPITHELIOMA.

In this case, which had been operated on two weeks before, there had not been a single bad symptom since the amputation had been made. In performing it, Dr. Gouley had expected to have made a lambdoidal incision in the perineum, but he found that he could get along very well with a single straight cut. The patient now passed his water freely through the urethra, the edges of whose orifice were continually becoming more and more inverted, so that, as was remarked, the man had quite a respectable little *vulva*. One-third of the sinus of the bulb had been included in the part amputated. On examining the condition of the parts to-day, Dr. Gouley found that there was a considerable redundancy of scrotal tissue, and snipped this off with the scissors, in order that an appearance of greater neatness might be presented when the case was completed.

A WELL-DILATED STRICTURE—UNNECESSARY DIVISION OF THE MEATUS.

In this case Dr. Gouley passed a very large sound (a No. 18), with the greatest ease, and in doing so he called attention to the condition of the meatus, which he considered had been unjustifiably mutilated, and, to use his own words, was now gaping like a woman's vagina. He thought it really too bad that an individual should have to go about with his urethra in this condition, and yet he knew at least twenty men in this city who had been put in this unfortunate predicament. One positive evil, besides the deformity that resulted from this terrific slashing of the meatus, was the very marked induration of the urethra which always resulted from it.

ACUTE PROSTATITIS—THE PROPER METHOD OF INCISING THE MEATUS.

This patient, who had an abscess of the prostate, was doing well, and Dr. Gouley showed that he could pass a No. 18 with the same ease as in the last case, "notwithstanding the fact that his urethra had not been split almost to the base of the glans, and hypospadias caused in consequence." Yet a moderate incision in the meatus had been made, and with the most happy results. The orifice, although quite as much enlarged as there was any necessity for its being, was entirely normal in every respect, and it was observed that after the instrument was withdrawn it contracted as naturally as though it had never been cut at all.

Progress of Medical Science.

DISCHARGE OF THIRTEEN INCHES OF THE SMALL INTESTINE PER ANUM, WITH RECOVERY.—Dr. Powers, of Michigan, reports the following interesting facts which occurred in a patient under his care. A boy of fourteen was taken suddenly with severe pain in his bowels, and soon after commenced to vomit, and had thin and dark evacuations of blood. When seen on the third day he had high fever, tympanites, and other symptoms of peritonitis. He was then put upon opiates, aconite, and light mercurial alteratives, while hot fomentations were applied to the abdomen. The bad symptoms had so far abated at the end of forty-eight hours that a movement of the bowels was attempted. A full dose of castor-oil, with fifteen drops of turpentine, was administered. The symptoms immediately became severe; there was vomiting of stercoraceous matter, and discharge of a dark and bloody character from the rectum. Deeming that the case was one of intestinal obstruction, a more strictly opiate treatment was adopted, while at the same time a large warm-water enema was given every six or eight hours. Under this treatment he again became comfortable, and on the morning of the eleventh day had, for the first time during his sickness, a free rectal evacuation "of the consistency of batter." On the morning of the thirteenth day there came away with "a free natural movement, some thirteen inches of the small intestine and the portion of the mesentery involved with it." At the date of the communication, four weeks later, he had nearly recovered his health.—*Mich. Med. News*, June 10, 1878.

LIGATION OF THE EXTERNAL ILIAC.—Prof. Toland, of California, has operated in all nine times, with seven successes. The last case was for aneurism of the left external iliac, and exemplifies his method of treatment. The patient was a German, forty years of age. The tumor extended from Poupart's ligament, upward in the course of the vessel, one-third of the distance to the umbilicus, and was about the size of

the closed hand. The operation consisted in making the semilunar incision through the skin with the concavity inwards, and then in cutting through the abdominal muscles and transversalis fascia, so as to correspond to the first incision. Separating the peritoneum from the artery was found to be difficult, and led to an unavoidable rupture of the membrane. The vessels were then tied with a strong silk ligature, about two-thirds of an inch below the bifurcation of the common iliac. The wound was closed by silver sutures, leaving room at the lowest part for the ends of the ligature and for drainage. Adhesive plaster supported the stitches, and simple water dressing was applied. On the day after the operation peritonitis set in. On the tenth, the unfavorable symptoms had disappeared under opium. When the ligature came away on the thirtieth, the discharge was slight. For the six days following there was an escape of clotted blood, followed by profuse suppuration. This event was attributed to the rupture of the sac and its contained coagula. The subsequent progress of the case was favorable. Prof. Toland does not isolate the vessel from its sheath, and thus avoids denuding any part of the arterial tunic, which is thus never deprived of its nutritive supply through the vasa vasorum of the sheath. Of the two fatal cases, one died from gangrene of the leg, and the other from repeated hemorrhages, in "small vessels that were ruptured in detaching a strongly adherent and thickened peritoneum from the iliac fossa."—*Western Lancet*, June, 1878.

THE PRIORITY OF PARENCHYMATOUS OR INTERSTITIAL NEPHRITIS AND THE ORIGIN OF CASTS.—Dr. Aufrecht, of Magdeburg, has been making (*Centralblatt f. d. Med. Wiss.*, May 11, 1878) experiments upon rabbits with the view of determining some of the obscurer points in the pathology of renal disease. He has tied the left ureter in a number of instances, and has come to the conclusion that at first a purely parenchymatous change is produced, followed in a few days by interstitial deposit. Examining the kidney microscopically on the third day, he found most beautiful casts in the convoluted tubes, while the epithelial lining them was granular and filled with oil drops. In cases where the ureter had been tied six, twelve, or twenty-three days, the interstitial tissue was thickened by numerous cellular bodies, the epithelium was less granular, and there was no trace of any casts. He also observed that the casts were not always continuous, and occasionally were separated by fine lines. In two instances he states that he saw bright spherical bodies pushing out from the epithelial cells. These drops, he thinks, unite and form casts. As opposed to the view that the casts are derived from the fibrine of the blood, is the statement that on the third day after ligature of the ureter there is no change to be seen in the interstitial tissue or blood-vessels. Besides, the lateral pressure from the retained urine which the dilated ureter and pelvis of the kidney produce makes it improbable that any fluid can escape from the blood. Thirdly, when interstitial change has occurred, casts are no longer seen. These interesting experiments deserve repeating.

THE VALUE OF ELECTROLYSIS IN THE TREATMENT OF OVARIAN TUMORS.—Dr. Mundé, of this city, in an elaborate paper on this subject, which gives a more or less perfect record of fifty-one cases of ovarian tumor, many of which have never been published, comes to the following conclusions: In nineteen, or 37.25 per cent., no benefit was derived from the electrolytic treatment, not counting four cases in which the improvement was not permanent; in thirteen, or 25.49 per cent., decidedly injurious effects were directly produced by the electrolysis, in consequence of which nine of these, or 17.64 per cent. of the whole fifty-one, died. Ten, or 19.62, received no permanent benefit. Of the nine fatal cases, four, or nearly one-half, occurred in multilocular tumors, while of the ten cases reported as cured, in which the nature of the case is given, five were unilocular growths, and five polycysts. About fifty-five per cent. of these recorded cases have been cured, and the possibility of a cure by such means is therefore established.

The question whether monocysts or polycysts are more amenable to treatment is as yet undecided, though it would seem that the tumors most likely to be benefited by electrolysis are small monocysts and polycysts with thin walls and fluid contents, and absence of large, solid masses. Notwithstanding these cures, the percentage of successes compare unfavorably with those of ovariotomy (55 per cent. as against 70 to 80 per cent.); while the deaths from electrolysis (17.6 per cent.) nearly equal those of ovariotomy in later years (20 to 30 per cent), and far exceed those in Spencer Wells's last series of fifty-five cases (5 or 9 per cent.).—*Reprint from Gynecological Trans.*, vol. ii.

THE INVERSE TYPE OF TEMPERATURE AS A SYMPTOM OF MILIARY TUBERCULOSIS.—It is stated (*Il Morgagni*) that the rise of the temperature in the morning and the fall in the evening are indications of miliary tuberculosis, either of the acute variety or as secondary to cheesy pneumonia. Of seventy-one patients who died of phthisis under Prof. Brunniche, this type of temperature was noted in sixty-three per cent. In patients with cheesy pneumonia without miliary tuberculosis it occurred in twenty-five per cent., while in cheesy pneumonia with miliary tubercles the proportion was eighty-five per cent. The greater the difference between the morning and evening temperatures, the more rapid the advance of the malady.—*La France Médicale*, May 8, 1878.

ON SUDDEN DEATH AFTER SEVERE BURNS.—Prof. Ponfick, of Göttingen, carried out recently a series of experiments on dogs, with a view to discover the cause of the sudden death which sometimes occurs after an extensive burn. Whenever the burn was of a severe character, he invariably found a marked alteration in the blood of the animal a few minutes afterwards; it consisted in a destruction of the red corpuscles, which were broken up by a process of crumbling or dissolution into an immense number of small colored particles. These fragments disappeared after several hours, the length of time they persisted varying according to their original number. Before disappearing, however, they excited grave disturbances in different organs of the body, and especially in the kidneys, through which a large portion of the hæmoglobin, that which was now circulating to a certain extent free in the blood, was excreted. In all severe cases at least, a violent inflammation of the parenchyma of these organs was excited, which was manifested by the appearance of peculiar, colored casts in the urine, by extensive obstruction of the urinary tubes, by fatty degeneration of the epithelium, etc. A portion of the fragments, on the other hand, remained in the body; they disappeared in the pulp of the spleen and in the medulla of the bones, where they were taken up by the contractile cells, in the substance of which they probably underwent a gradual destruction. This absorption into the substance of the spleen is evidenced to the naked eye by a striking increase in the size of the organ, as well as by its increased redness and succulence on section.

Prof. Ponfick believes that, at all events, a certain number of the acutely fatal cases, as well as a portion of the severe symptoms in the cases that terminate in recovery, must be ascribed to a sudden and extensive destruction of the red corpuscles. He does not venture any opinion with regard to the influence of the rapid suppression of the urinary excretion on the course of the case. In view of the destruction of the red corpuscles, he suggests the employment of transfusion in cases of severe and extensive burns with urgent symptoms.—*Berliner klin. Wochenschrift*, 1877, No. 46

On the Necessity of Caution in the Use of Chloroform during Labor.—Dr. Lusk, of New York, in a recent paper submitted the following propositions:

I. Deep anæsthesia, carried to the point of complete abolition of consciousness, in some cases weakens uterine action, and sometimes suspends it altogether.

II. Chloroform, even when given in the usual obstetrical fashion, namely, in small doses during the pains only, and after the commencement of the second stage, may, in exceptional cases, so far weaken uterine action as to create the necessity for resorting to ergot or forceps.

III. Patients in labor do not enjoy any absolute immunity from the pernicious effects of chloroform.

IV. Chloroform should not be given in the third stage of labor. The relative safety of chloroform in parturition ceases with the birth of the child.

V. The more remote influence of large doses of chloroform during labor upon the puerperal state, is a subject that calls for further investigation and inquiry.

Dr. L. says that with these five propositions he is prepared to close his indictment against chloroform in midwifery. It is, he says, not a formidable one, and need not deter from its cautious employment. But the sense of possible danger which governed its use in the hands of those to whom we owe its introduction into practice, has been replaced by an overweening confidence.

Progressive Muscular Atrophy due to Gout.—M. Potain reports a case of progressive muscular atrophy, the origin of which he traces to the influence of gout, from which the patient was suffering. The muscles affected were those of the arms and face; the biceps had almost completely disappeared. There was a marked feebleness of hands and arms, and absence of expression in the face due to the atrophy of the muscles in these regions. The character of the affection left no doubt as to its diagnosis, but its etiology was a point of more difficult decision. The causes to which are generally ascribed this affection were absent in this case, and M. Potain seeks in the gouty habit an explanation of this otherwise singular disease. Could not, he asks, the gouty changes so often found in the other organs, be also produced in the cord, and thus give rise to the muscular atrophy? Graves reports two cases in which affections of the cord occurred during the course of gout, but the contents of the spinal canal have not been examined with sufficient care in cases of this disease to give any statistical value to the records.—*Gazette des Hôpitaux*, April 25, 1878.

Effect of the Intra-venous Injection of Urea in Producing Convulsions.—A paper on this subject by MM Feltz et Ritter, was presented to the *Académie des Sciences* by M. Bouillaud, in which the following conclusions were reached:—Pure, artificial, or natural urea injected into the venous system, even in very large doses, never gives rise to convulsive symptoms; it is very rapidly eliminated by the secretions. There are in normal blood no ferments which convert urea into ammoniacal salts; the rapidity of elimination cannot be considered as a cause of this non-conversion, for, by suppression of the renal secretion, the elimination of urea can be retarded without hastening the appearance of eclampsia. The urea, which, in large doses, excites convulsions, is rendered impure by the admixture of someof the salts of ammonia, the presence of which can be easily demonstrated by Nessler's test. M. Jolyet related to the *Société de Biologie* some experiments which he had made upon this subject, and which gave him negative results. Into the circulation of a dog, from which the kidneys had been removed, he injected ten grammes of artificial urea, and neither on the day of the operation nor on the following day were any convulsive symptoms observed. This experiment was repeated with similar results, although fifteen grammes of urea instead of ten grammes were used; this in a dog weighing six kilogrammes.—(*Gazette Médicale de Paris*, April 20 and 27.) Dr. Paul Cuffer has also made this an object of investigation, and has given his results in his thesis. His experiments consisted in the injection of urea, carbonate of ammonia, and creatine. The injection of urea, although in very large quantities, did not affect the functions of the animal experimented upon, nor did it alter in any respect the blood. On the contrary, after the injection of carbonate of ammonia, the capacity of the blood for the absorption of oxygen was lessened almost one-half; moreover, it was found by enumeration that in each cubic millimetre of blood there was a diminution of nearly one million globules. The action of creatine is similar to, but more energetic than that of carbonate of ammonia; both give a diminution in the number of blood-globules. In Bright's disease, the conversion of a portion of the retained urea into carbonate of ammonia (which differs from urea in the elimination of one equivalent of water) is easy; there is also a certain quantity of creatine retained in the circulation. These two poisonous substances are capable of producing the changes of the blood which are observed in Bright's disease; the globules are diminished in number, and those that remain are altered in constitution; they become very resistant, are not altered in shape by reagents, and are, so to say, paralyzed; their power of absorbing oxygen is greatly diminished. This alteration of the blood combined with the spasm of the vessels, pointed out by M. Potain, gives rise to the dyspnœa observed in this disease.—*La France Médicale*, May 11, 1878.

Collodion as a Preventive of Sea-Sickness.—Dr. Laederich claims that collodion has remarkable power as a preventive of sea-sickness. It should be employed as follows: Before embarking, the voyager should apply successively three layers of ricinated collodion to the epigastrium, overstepping slightly the anatomical limits of that region. The layer should extend below to a line immediately above the umbilicus, laterally to a line about two inches outside of the nipples, and above to some inches above the border of the ribs. When the voyage is expected to last more than a few days, a small quantity of the collodion should be taken along to repair the cracks in the plastering. Dr. Laederich is unable to say from experience whether or not the collodion possesses curative as well as preventive powers. He believes it does, however, because he has employed it successfully as an anti-emetic in the painful vomiting of peritonitis. Applied to the epigastrium as above, it always diminished and often arrested the vomiting.—*L'Année Médicale*, June.

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HOMŒOPATHY AND EXCLUSIVENESS.

THE Medical Society of the County of New York at its last meeting had a question brought before it by the Comitia Minora (Executive Committee) which involves many important considerations. It appears that one of the members of the Society had requested the Comitia to inform him officially whether the recent action of the Homœopathic Society of the State of New York released its members from the ban of exclusiveness as regards consultations which has heretofore been placed upon them by the profession. It will be remembered that this action of the Homœopathic Society was reported in our columns some months ago.

The Code of Ethics of the American Medical Association upon this point reads as follows:

"But no one can be considered a regular practitioner or a fit associate in consultation whose practice is based on an exclusive dogma to the rejection of the accumulated experience of the profession and the aids actually furnished by anatomy, physiology, and organic chemistry."

The exclusive dogma referred to at the time when this code was formulated was probably that of Homœopathy, viz., that all diseases should be treated in accordance with the proposition *similia similibus curantur*.

It has long been notorious that many professed homœopaths have not as a fact treated their patients exclusively in the manner indicated. For years many of them have selected their remedies upon allopathic and antipathic as well as upon homœopathic indications. In view of the fact that at all their colleges, anatomy, physiology, chemistry and the other fundamental branches of a medical education are taught, it would be absurd to say that they do not avail themselves of the aids furnished by these branches of science. It is indeed quite recently that they have made a public declaration bearing upon these facts.

Under the circumstances then, the Comitia have been asked to state their opinion as to whether the so-called liberal homœopaths are really exclusive practitioners under the code. The reply was as follows:

"That strict adherence to the proposition, '*Similia Similibus Curantur*,' in the selection of medicines and the rejection of '*the aids furnished by anatomy, physiology, pathology and organic chemistry*,' constitutes exclusiveness.

"Those who do not reject the aids referred to, and who do not prescribe homœopathically when better ways are known to them, are not exclusives. The only exclusives in this country known to the Comitia Minora are a minority of the Homœopathic Medical Society of the county, and the members of the Eclectic Medical Society, the constitution of whose State organization excludes the employment of 'antimonials, mercurials, and venesection.'"

The adoption of this portion of the Comitia's report, when brought before the Society, gave rise to considerable discussion, and was finally rejected by a vote of 32 to 20, a goodly number of members present not voting.

There is very little doubt on the one hand that the report of the Comitia was technically correct, and on the other hand that there was a great deal of opposition to consulting with professed homœopaths on any terms. It was this latter feeling which undoubtedly influenced the vote. Under these circumstances, as in many others, societies frequently decide points at issue from prejudice rather than reason.

A careful examination of this question leads us to the belief that the Comitia could not have met it in any other manner than they did, and that the action reveals the fact that the Code is defective in so much as it does not at present cover what the majority of this Society believe to be the requirements of this case. If it is the desire of the Society, or of the regular profession to exclude from professional fellowship all those who are connected with homœopathic organizations, or who practise homœopathy, then it will be obviously necessary to enact a suitable by-law or procure a necessary amendment to the Code.

The importance of a strict interpretation of the facts would be readily perceived were such a case of alleged violation of the Code brought to trial. The laws which govern the profession of the State of New York confer upon the County Societies certain powers and privileges, among others that of adopting any by-laws they choose, so long as they are not contrary to the statutes.

The Medical Society of the State of New York has adopted a Code of Ethics as a portion of their by-laws, and there is little doubt if a member of their Society were convicted of a breach of the Code for consulting with a liberal Homœopath, that any and every court in the State would reverse the decision of the Society on the grounds of illegality, and thus place the charter of the Society in jeopardy. The

reason for this statement is obvious enough when we consider that no member of a Society can be convicted of an offence that is not provided for by its by-laws; and as there is no provision against consultations with Homœopaths as such, but simply against them as exclusives, when their exclusiveness is dropped that portion of the Code necessarily becomes null and void. If it is desired to exclude them in consequence of their belief in the ability of prescribing in accordance with the law of similars, it will be necessary, as before stated, to provide for them by new enactments.

MEDICAL EDUCATION IN FRANCE.

THE letter from Dr. Cruse in another column presents some very significant facts connected with medical education and medical preferment in France, which every medical man in this country may contemplate with profit. We know that the story is an old one, but the earnestness and forcibleness with which it is retold gives it a new interest. The subject cannot be presented too often to the rising generation of medical men, and the reforms which its candid discussion invites, cannot be too vigorously advocated. Dr. Cruse very pertinently remarks that as we cannot all expect to be professors in colleges, and thus directly benefit by the steady overcrowding of the profession, the rising generation of medical men must look around them for some protection against future ruin. And it is just such matter-of-fact appeals as he makes that draw serious attention to the monstrous evils connected with our system of medical education, and that may in time create a reaction which may place professional competition upon its proper level. Every right-minded medical man is in favor of rewarding merit. Every conscientious student is willing to have the tests of fitness applied to every professional position, to give credit to every one who fairly wins his spurs, and to honor every ambitious endeavor to gain eminence by faithful work. To men of this way of thinking the admirable system of preferment for place as it exists in France, commends itself as the beau ideal of fair play, and rules out of the question the possibility of self-constituted professorships, and hospital appointments secured by mere wire-pulling or by political influence.

CONVULSIONS IN A CHILD DUE TO THE PRESENCE OF A HAIR IN THE ALIMENTARY CANAL.—A child under one year of age, suffered for several weeks from convulsions, which varied in severity and were frequently repeated. It appeared to be healthy in all other respects. All the usual methods of treatment were employed without success. At last the mother noticed the end of a hair lodged between the two incisors of the child, and, on drawing on it, removed a hair nearly a yard in length, which had hung down into the throat of the little patient. After the removal of this foreign body. the convulsions ceased as if by enchantment.

Reviews and Notices of Books.

THE SOURCE OF MUSCULAR POWER. By AUSTIN FLINT, JR., M.D., Prof. of Physiology and Physiological Anatomy, Bellevue Hospital Med. College, N. Y. D. Appleton & Co., 1878. 12mo, pp. 103.

THE problem selected by Dr. Flint for solution is, whether the food is concerned *directly*, by its transformation in the production of muscular power, or, does the muscular effort involve changes in the muscular substance itself, this substance being destroyed as muscular tissue, discharged from the body in the form of excrementitious matter, and the waste repaired by food. In other words, is the human body a mere mechanical machine, dependent for its energy solely on the food, which it utilizes as fuel, or, are there other subtle and powerful influences at work which produce the muscular power?

At first sight this question appears simple and to admit of a ready solution, but the investigation soon develops difficulties, which increase as the study proceeds. The theories of Lavoisier and his followers have greatly advanced our knowledge of the respiratory processes, and the more modern researches of Bernard and Brown-Séquard with regard to the influences of the nervous system upon calorification, local variations in animal temperature, &c., showing that the production of animal heat is one of the phenomena incident to the general process of nutrition, and that it is not due simply to oxidation of hydro-carbons. We know oxygen is consumed, carbonic acid produced, and heat generated in the bodies of animals; but we by no means understand all of the intermediate processes between the appropriation of oxygen by the tissues and the production of carbonic acid. We cannot raise the temperature of animals above the normal standard by increasing the supply of the hydrocarbons in the food, nor can we arrest the production of heat by depriving animals of the so-called calorific principles.

Again, no one can say why the growth of muscle and the development of muscular power is restricted within certain limits, no matter how much food may be taken and digested; neither can a reason be given why a man should gradually become on an average 5 feet 8 inches in height, and weigh 140 pounds, and then maintain that standard throughout his adult life. And lastly, why, after exhausting one set of muscles, he is still capable of severe work with another.

We mention these facts to show that the question at issue is quite intricate, and may surprise many by the varied nature of the detailed inquiry which must be undertaken before we can hope to arrive at a thorough knowledge of the subject. As is well known, Dr. Flint has taken advantage of opportunities to study many of these points upon Weston, and through the assistance of the latter was enabled to make experiments upon the living organisms under specially favorable physiological conditions. The results obtained have been carefully studied and compared with those of Pavy taken under similar circumstances, and finally Dr. Flint has presented the conclusions deduced from the facts thus carefully gathered.

It is not our intention to give a synopsis of Dr. Flint's interesting book, but rather to indicate its scope and aim, especially as its one hundred pages can be studied in a very short time.

In conclusion, we will briefly state that Pavy's views

are not accepted by Dr. Flint, who attributes the direct source of muscular power to the muscular system itself; and further, that the muscular power immediately involves the destruction of a certain amount of muscular substance, of which the nitrogen excreted is a measure. Dr. Flint also considers nitrogenized food *indirectly* as a source of power, as by its assimilation by the muscular tissue—it repairs the waste and develops the capacity for work; *but food is not directly converted into force* in the living body, nor is it a source of muscular power, except that it maintains the muscular system in a proper condition for work. Such are the conclusions of Dr. Flint, and for the data upon which he has founded them we must refer our readers to the work itself.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by Dr. H. VON ZIEMSSEN. Vol. XVI. DISEASES OF THE LOCOMOTIVE APPARATUS, and GENERAL ANOMALIES of NUTRITION. By Prof. H. Senator, Prof. E. Seitz, Prof. H. Immermann, and Dr. Birch-Hirschfeld. Translated by E. Buchanan Baxter, M.D., London; John Todhunter, M.D., Dublin; Godfrey Aigner, M.D., and Frank P. Foster, M.D., of New York; and Henry P. Bowditch, M.D., of Boston. Albert H. Buck, M.D., New York, Editor of American Edition. New York: Wm. Wood & Co., 1877.

THE first 228 pages of the volume now before us are from the pen of Prof. H. Senator, of Berlin, and embrace all that the volume contains on Diseases of the Locomotive Apparatus, including Rheumatism in all its different forms, Gout, Arthritis Deformans, Rickets, and Malacosteon. Prof. Senator is a comparatively young man, and quite a young clinician. Probably, therefore, his contributions on these subjects should be dealt with leniently. They not only contain nothing new, and tell the old things in a very dry, uninteresting manner, but, what is absolutely unpardonable, they are not up to the times. We expect better things of a clinical professor in Berlin than not even to mention salicylic acid or salicin in the treatment of rheumatism! This deficiency, it is true, is made good by a Translator's note on these remedies at page 1039; but no allusion to this note is made in the article on rheumatism nor in the index, and the reader who is looking up rheumatism is left to stumble on to the note at some future time when he happens to be studying Diabetes. We are told in this note that Prof. Senator wrote his paper on rheumatism before these remedies came into use, and that "the pressure of other business having prevented him from contributing the needful supplement on this important subject," etc., etc. All of which is a very lame apology for work half done.

Fortunately this Cyclopædia has been remarkably free from this kind of contributors. The best men in Germany have given it their best thought and labor, else it could never have made for itself the place it has on both sides of the Atlantic.

Sandwiched in between Diseases of the Locomotive Apparatus and Disorders of Nutrition are twenty pages, by Prof. Seitz, of Giessen, on "Slight Disorders caused by Catching Cold." The prospective appearance of this article has repeatedly been referred to by other writers in the Cyclopædia, and the reader has been led to expect that when this article appeared he should at last have something scientific and authoritative on the *rationale* of "taking cold." In this he will be disappointed, for while Prof. Seitz furnishes a very readable little paper, it contains nothing new nor profound, and neither helps us in prophylaxis nor treatment.

The "General Disorders of Nutrition" are ably introduced by Prof. Immermann, of Basle. He explains and defends the classification which admits of such a division as this. While endorsing "the humoralistic views which have once more—and rightly—invaded our pathology," he still thinks it "very likely that the constitutional character of many diseases is determined by an abnormal change of the tissue elements; that there exist general disorders of nutrition whose *primary* seat is not in the blood, but in all, or, at any rate, in a great part of the remaining tissues." The danger, at the present age, of concentrating our attention on the accurate examination of single parts, and failing to note the constitutional tendencies as a whole, is noticed, and the author insists "that the treatment of intercurrent disease in a constitutionally affected subject must be so narrowed or extended as to fit it to the abnormal course of the vital processes, if we would reckon on a favorable issue."

The first one of the disorders taken up is "Anæmia, or Poorness of Blood," which is treated of at considerable length and in a most admirable manner. The etiology and pathology of this condition are ably discussed; while under the head of treatment the author lays down rules for the dietetic and other management of different varieties of *dyspepsia*, which are more practical and valuable than those of most writers who profess to be handling dyspepsia. We cannot too highly commend this entire section to the attention of American physicians. If there is one thing which we need to know, and which, as a rule, we don't know, it is what dietary to recommend to different kinds of dyspeptics.

While highly prizing iron in many cases, Prof. Immermann depreciates its indiscriminate use in anæmia. Whereas simple atonic dyspepsia may be relieved and cured, together with the anæmia, by the use of iron, "the different varieties of true dyspepsia which so often stand in a causal relationship to the anæmia, are usually made worse by ferruginous tonics." He considers that iron compounds are, upon the whole, contraindicated by fever. Also that "iron is contraindicated when hemorrhage is either imminent or actually going on."

The value of cod-liver oil for its conservative influence in anæmic marasmus is duly appreciated, and its superiority to other fatty substances is explained on the ground of the admixture of biliary constituents which it contains. At the same time, Prof. Immermann tells us that Trommer's Malt Extract has for the past few years "almost entirely taken the place of cod-liver oil in the treatment of phthisis and other wasting diseases, at the Basle Hospital." The value of gelatine as an auxiliary article of diet is also vindicated.

A separate and quite lengthy chapter is devoted to the subject of *Chlorosis*, the line of demarcation between this and anæmia being clearly drawn. Like its predecessor, this chapter is thorough and interesting, and will convey to most readers much new and valuable information on the subjects discussed. In closing his remarks on the pathogeny of chlorosis, the author says: "Without, therefore, committing myself to a belief that all cases of chlorosis may be traced to one and the same origin, and fully admitting that the disease may often be a temporary consequence of a temporary disturbance of hæmatopoiesis, I nevertheless hold with Virchow that a majority of the severer forms of chlorosis, especially those showing an obstinate disposition to recur, are ultimately due to a predisposition, either inborn or acquired at a very early stage of development, and are therefore incapable of being radically cured."

After a brief chapter on "Progressive Pernicious Anæmia," Prof. Immermann devotes 120 pages to the subject of *Corpulence*, and here again does himself credit by the thoroughness and the practical character of his work. Want of space alone forbids a more detailed notice of the many good points made concerning the origin and treatment of obesity. One alone we may not omit, viz., that there is such a thing as an anæmic corpulence, which contraindicates the usual restrictions of diet, and imperatively demands iron in its treatment.

Scrofulosis and Affections of the Lymphatic Glands in General are discussed by Dr. Birch-Hirschfeld, of Dresden. He begins with a very concise statement of the different views held with regard to the mutual relations of scrofulosis and tuberculosis, and the theories concerning the essential character of tubercle. The following is his definition of scrofulosis: "We may designate scrofulosis as a constitutional anomaly which shows itself by changes partly of an inflammatory, partly of a hyperplastic nature, excited in the tissues by a comparatively slight noxious influence—changes which are endowed with insufficient recuperative power, and are therefore prone to lapse into retrogressive metamorphosis, and, following thereupon, *into local tuberculosis*."

The question of the danger of conveying scrofulosis by vaccination, like many other questions with regard to scrofula, is left without a positive answer, though the author evidently leans to the negative. Nothing new appears under the head of treatment. The author is disposed to expect but little from the recently vaunted excision of scrofulous glands. Dr. Birch-Hirschfeld's article is thorough and valuable throughout.

The remaining portions of the volume are occupied by Prof. Senator in treating of *Diabetes Mellitus and Insipidus*. He divides diabetes mellitus into a diabetes proceeding primarily from the nervous system (neurogenic) and a diabetes proceeding primarily from the intestinal canal or the liver (gastro-enterogenic and hepatogenic).

It is evident that in the question of diabetes Prof. Senator has found one that interested him, to which he has given his best labor, and which he therefore handles in a manner that is both interesting and profitable to the reader.

CONGENITAL OCCLUSION AND DILATATION OF LYMPH-CHANNELS. By SAMUEL C. BUSEY, M.D., Professor of the Theory and Practice of Medicine, Medical Department of the University of Georgetown. New York: William Wood & Co. 1878. Pp. 187.

THERE is a class of congenital deformities occasionally coming under the notice of physicians which have their expression in a peculiar hypertrophy of the skin and subcutaneous tissue, some of which have been classed under the head of congenital elephantiasis. The author of the volume under review has collected from the various foreign and domestic journals, eighty-six cases, and mentions two occurring in his own practice. All these cases are reported in detail, and make up the greater portion of the book. He states in his preface, "that the volume is, for the most part, a republication of a serial contribution to the *American Journal of Obstetrics*, and is the result of an effort, on the part of the writer, to study and analyze the complex phenomena exhibited in this class of cases," which he considers due to congenital occlusion and dilatation of the lymph-channels. The result of this occlusion and dilatation seems to express itself in two ways: I. As an hypertrophy of the integuments, sometimes involving the bone, as the tibia; accompanied, in many cases, by the formation of cysts or caverns in the hypertrophied tissue, containing a serous, milky fluid, which, in one case the author has demonstrated, communicated with the lymph-channels of the part; or there may be a simple oozing of a serous fluid from the enlarged limb. II. In the occurrence of lymph varices in various portions of the body, but most commonly met with about the genitals, or in the upper part of the thigh, from which there is a constant or occasional discharge of a serous or milky fluid.

The hypertrophied parts are firmer than normal, not œdematous, rather inelastic, and not pitting on pressure.

He again divides these congenital hypertrophies into two groups; in the first the affected parts grow in proportion with the rest of the body; in the second the "giant formation" is in excess of the development of the rest of the body. Cases belonging to both of these divisions are given in the cases collected.

The hypertrophy may not only be confined to the circumference of a limb, but may affect its length, and again this elongation may be due to an increase in the length of the bone, or to the formation of cushions of fat. Bone thickening is most frequently found in connection with connective-tissue hyperplasia.

No constant modification of the arterial system was found. Occasionally it was normal, but usually the vessels were very much atrophied, sometimes absent, but never enlarged. In a few cases there was an increase in the muscular power of the hypertrophied limb.

In regard to the etiology and pathology of these affections, it is involved in great obscurity. "To attribute them to congenital defect of formation is simply the expression of a fact without offering a satisfactory explanation." . . Very many of these cases find their cause in nutritive disturbances, and changes taking place in intra-uterine life, and chief among these is inflammation. The influence of race and condition is marked; most of the cases have been reported by German authorities, and occurred among hospital and dispensary patients. . . The conclusion is inevitable, that blood impoverishment, a meagre diet, and bad hygiene are, at least, exciting agencies."

In regard to treatment, the cases divide themselves into curable and incurable. To the latter class belong those cases where the anatomical lesion is so located as to render positive diagnosis impossible, or where the congenital defect is so situated, or is of such a character as to forbid interference.

In regard, then, to the first class, the treatment divides itself into local and constitutional; the latter relates to the exhibition of such medicines as will combat the anæmia arising from the loss of lymph, and to prevent the manifest tendency to tubercular affections. Local treatment consists in compression, puncture, free incisions, cauterization, and extirpation.

It is impossible, in a review of this kind, to do more than draw attention to this very interesting class of deformities, and to advise those wishing to inform themselves on the subject to consult the book itself, as it will abundantly repay a careful perusal. It is illustrated with fifty six plates.

TWO CASES OF RETROFLEXION IN NEW-BORN CHILDREN.—These cases are reported by Dr. Carl Ruge. In both of them the point of flexion was at the orificium internum, and both presented a thickening of the posterior wall of the uterus.—*Deutsche Med. Wochen.*, No. 24.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

OBSTETRIC SECTION.

Stated Meeting, May 20, 1878.

DR. SALVATORE CARO, CHAIRMAN.

THE TREATMENT OF PUERPERAL CONVULSIONS OCCURRING AFTER LABOR.

Dr. S. T. HUBBARD opened the discussion upon the above subject by relating the history of a case as follows: He was called to visit Mrs. E. on the 16th of March, 1878. She was thirty-six years of age, pregnant with her first child, and within three weeks of her expected confinement. She was delicate in appearance, yet apparently in good health. She complained of headache, had flushed countenance, imperfect vision, and constipated bowels. A brisk cathartic was ordered. The urine was examined on the following morning, and found to contain about fifty per cent. of albumen, with some granular casts. After free opening of the bowels, infusion of digitalis was given in drachm doses, three times a day; also three drachms of bitartrate of potassa dissolved in water were ordered to be taken in the course of twenty-four hours. Under that treatment the quantity of urine increased to the normal. There was no puffiness of the face or œdema of the feet. At the end of one week the quantity of albumen had decreased from fifty to ten per cent. The bowels were kept free by the use of bitartrate of potassa. The headache and the imperfect vision, however, were more or less persistent. On the first of April the doctor ordered grs. vi. of calomel, with grs. x. of rhubarb, to be taken at bedtime. On the following morning he was called, found that the woman was in labor, and that labor-pains began at about 9 o'clock on the previous evening. The child was born at 5 A.M., and the labor was in every respect normal. The headache continued, and the patient was somewhat restless. Two drachms of paregoric with ten drops of laudanum were administered. At 7 o'clock A.M. she went into a violent convulsion, which lasted from one to two minutes. When the convulsion had ceased chloroform was exhibited, and the woman was bled from the arm to the extent of twelve or fourteen ounces. The patient became conscious, but was kept moderately under the influence of chloroform, and, at about 8 o'clock, grs. xv. of hydrate of chloral dissolved in water were thrown into the rectum, when she had another convulsion, more violent than the first. As the patient became restless from time to time, chloroform was administered. The infusion of digitalis was increased to ʒ ij. every four hours. At 11 o'clock another convulsion occurred, but was less violent than the two former. Treatment continued. A goblet of milk was administered within every four hours. When the chloroform was let up for a few minutes, the patient complained of headache and almost complete loss of vision. The pulse, after the first convulsion, was 130, and continued from 116 to 120 during the first twenty-four hours. Temperature, 101° F.

On the evening of the next day the patient became somewhat restless; the bladder was emptied with catheter; an injection of fifteen grains of hydrate of chloral was given, and, soon after, another and the last convulsion occurred. A cathartic dose of calomel and jalap was ordered. Only a small quantity of chloroform was used. The effect of the chloral hydrate was continuous, although the dose was small.

On the following day the patient was better. The disturbance of vision continued, but was confined mostly to the left eye; the disturbance continued for a week and then disappeared. A trace of albumen was found in the urine for two weeks. At the end of that time the woman appeared to be as well as the majority of women were at that period following natural labor.

With reference to treatment in this class of cases, Dr. H. reached the following conclusions:

1. That general bloodletting was called for when headache continued after labor was completed, and was attended by flushed face, restlessness, convulsions of a tonic character, and there had not been much loss of blood with the birth of the child.

2. That infusion of digitalis was useful to steady the heart's action, to allay nervous irritation, and also as a diuretic when aided by the addition of bitartrate of potassa.

3. That chloroform should be used sparingly.

4. That, although it was his first experience in the use of hydrate of chloral in these cases, its continuous action was apparently greater than chloroform, and he thought it was less likely to disturb the brain.

5. That, in cases in which there had been great loss of blood, or great prostration attended by nervous exhaustion, dependence might be placed upon hypodermic injections of morphine for controlling the convulsions. He would not resort to chloroform or to chloral under such circumstances, fearing that they might increase the nervous exhaustion, and thereby favor uterine hemorrhage.

The development of convulsions *after* the birth of the child was, in Dr. Hubbard's experience, quite rare.

In the last *three* cases belonging to this class which had fallen under his observation, general bloodletting had been employed in *two*, and those patients recovered; the case in which it was not employed terminated fatally, although chloroform, leeches, and dry cups were faithfully used. All the cases were primiparous.

DR. A. C. POST referred briefly to two cases in which convulsions apparently were prevented by bloodletting. One woman at the end of the eighth month of pregnancy was taken with giddiness, headache, confusion of thought, twitchings of the features, and partial loss of consciousness. It occurred before the subject of albuminuria in connection with pregnancy was recognized in the profession. As the patient had a full, strong pulse, it was thought advisable to resort to general bloodletting. While binding up the arm for that purpose the woman fainted. Dr. Edward Delafield was called in consultation. Dr. Post expressed the opinion that the fainting was a nervous phenomenon, and did not contraindicate the taking of blood. Dr. Delafield coincided in the opinion. She was bled freely. The headache and other symptoms disappeared, she went on to the completion of her pregnancy, and gave birth to a healthy boy who was now the father of a family. The second case, occurring many years later, had a similar history.

DR. SELL referred to a case in which convulsions occurred during and after labor. The patient was treated by the administration of croton oil, because of suspected overloaded *primæ viæ*, and by the exhibition of chloroform both internally and by inhalation. The woman had six convulsions in the first series, and three in the second. Bleeding was not resorted to, and yet a good recovery took place.

DR. DOWNS remarked that he had had fifteen cases

of puerperal convulsions, but in only two cases had the convulsions occurred after labor. Both cases terminated fatally. In one there was no albumen in the urine.

The cases of puerperal convulsions which had occurred before and during labor, and in which resort was had to bleeding, had all terminated fatally, while those patients who were not bled recovered. He had employed hydrate of chloral in cases of puerperal eclampsia with good results.

DR. HALL referred to a case in which, about two hours after labor, the woman was seized with convulsions and became hemiplegic and comatose. Bloodletting was not resorted to. Chloroform and chloral were used, but a series of convulsions occurred and the patient died at the end of four hours.

There was no indication that albumen might be present in the urine. The urine was not examined. It was supposed to be a case of cerebral embolism.

DR. CARO remarked that he had seen cases of puerperal convulsions at nearly all stages of pregnancy, during and after labor, and that he had never resorted to general bloodletting or to leeching except in *two* instances. He had relied chiefly upon infusion of digitalis given in ℥ ss. doses, three times a day, and bitartrate of potassa in ʒ i. doses, three times a day for their prevention.

He thought that puerperal convulsions occurred as the result of nervous disturbances, especially after confinement and independent of albuminuria, or even independent of urea.

A case was referred to in which convulsions occurred apparently from urethral irritation, because they came on only when the woman attempted to pass her urine. When the urine was drawn by the catheter convulsions did not occur. There was no albumen in the urine, the quantity of water was normal, there was neither headache nor œdema of the feet, but the countenance had a puffy pallid appearance, and there was disorder of vision.

The Section then adjourned.

Correspondence.

MEDICAL EDUCATION IN FRANCE.

THE WAY MEDICAL APPOINTMENTS ARE SECURED—THE OVERCROWDED PROFESSION IN THE UNITED STATES, AND OUR MEDICAL COLLEGES. VAGINAL EXAMINATIONS IN PARIS. THE PAQUELIN CAUTERY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—If I had the wealth of a Vanderbilt or an Astor, I would advertise a free excursion ticket and a week in Paris to ten thousand of our medical men, on the sole condition that during that time they made themselves familiar with the system of medical education and appointments in vogue here, and witnessed a public examination. This examination, or *concours*, is the admirable machinery by which the results of prolonged application are determined and the rewards adjudged to the meritorious. A man needs no friends, no influence, provided he has brain-power. Let him work. Step by step he rises, until he reaches the goal—eligibility for appointment to one of the chairs of the *École de Médecine*. This is the sole position to which candidates are directly appointed without previous immediate competition by *concours*, and possibly some wire-pulling may ultimately determine a choice. But here is an embarrassment of riches. The government is jealous of a school that has had for teachers such men as Orfila, Trousseau, Cruveilhier, Malgaigne, Berard, Nélaton, and Velpeau—jealous, I mean, of the repute and lustre of the past lights, and there is no chance, no possibility of an unworthy appointment. It is a precedent, so far as I know never violated, to take the new incumbent from the list of *professeurs agrégés*, and when one knows the innumerable tests to which it is necessary to submit before one is permitted to write *agrégé* after his name, it is certain that if wire-pulling is employed, it is because of the equally extensive attainments of those who are eligible. When men know everything about medicine, it is impossible to say that one candidate is more worthy than another.

My reason for desiring, as a possibility, a great number of American physicians to come and see the methods here is, that I doubt not some improvement will result therefrom to our own wretched system. Patriotism is all very well in its place, but I am not one of those representatives of the great republic who goes about the Old World resolved to find nothing there in which America cannot lick all creation. Indeed, if I had not my hospital certificate to fall back upon, I doubt whether I would announce myself as the bearer of an American diploma. The youngster with his new parchment, certifying to his being a *virum probum*, and all the rest of it, proud of honors won by a diligent grubbing upon Neil and Smith's Compendium, will receive a great shock when he learns that he is suspected of having obtained his document by an equivalent of money and nothing else, for these Frenchmen know well that to obtain a *bona fide* diploma from the best New York schools, the money is the main thing, and consequently they hold his cherished possession in the most particular contempt. Are they not fully justified? To graduate here, a native must first have his baccalaureate diploma. The School of Medicine does not even accord a matriculating examination to French students. The latter must first be prepared by general for professional study. There are five separate examinations to pass, and at the beginning of every third month the student must take an "inscription," that is, register his name at the bureau of the Faculty. After four inscriptions, he is allowed to come up for examination in chemistry, natural history, and botany. After the twelfth inscription, the second examination takes place. This is in anatomy and physiology. At the end of the fourth year, the sixteen inscriptions having been made, pathology, hygiene, legal medicine, pharmacy, materia medica and therapeutics are the subjects for examination. The last examination—the fifth—is instituted at the Hôtel Dieu or La Charité. This is a practical test. The thesis amounts to something else than a rehashed chapter of a text-book. It is printed, and if exceptionally good, lays the foundation of a reputation for the author. Lastly, students serve in the hospitals, and go through the wards with the professors.

There is real clinical instruction—not merely talks to several hundred persons assembled in an amphitheatre. Let the newly-made M.D. of one of our New York schools ponder on these things, especially if he has taken two full courses: the first, at a winter college, the second, the ensuing spring, at one of those accommodating institutions specially organized so that a man can assume all the honors of graduation after paying his money—this always first—and attending, or strictly speaking, waiting during a course of lecturing of eight months. Medical men here know these things, and very properly decline to

consider the product of our own ridiculously superficial and inadequate course worthy of any comparison with their thorough training of aspirants for a degree. Their own professors are men of eminence who have won their positions and are paid by the Government; they know that in our numerous schools the professors appoint themselves, and by public advertisement and underbidding—such as is found in the circulars of some of our colleges, addressed to physicians and offering to discount the cost of a course to their students—compete for the prize of a large class. Here the only interest of the examiners is to determine the fitness of the candidate to assume the honors of his profession, and they rather enjoy plucking the unlucky dullard! With us self-interest, the money paid, and numerous considerations equally pertinent, combine to insure tender treatment at examinations, and the individual whose gross ignorance and stupidity compel his rejection at the hands of the more important school, can search further with the certainty of finding some impecunious "university" glad to render him full equivalent for his fees.

Here, when a hospital position is vacant, they do not load some well-known name with the additional title, or push a nonentity into the place, to the amazement of those who wonder by what elaborate machinery of wheels within wheels this kind of business is done while the seat is yet warm from the previous occupant. On the contrary, a general public announcement invites those who are entitled, by reason of many previous competitions, to hand in their names, accompanied by their contributions to medical literature, and a record of honors, past and present. This is but preliminary to a new and formidable test, and the decision is made by strict, impartial, skilled judges of the quality of brains—judges who themselves have proved, likewise by public *concours*, their fitness to sit in such a tribunal. These men have heard of our own beautiful and simple process, known to the vulgar as *boosting*. They know how a man who walks on the stage at Steinway's, or the Academy of Music, to the music of the band, and after having been prayed over, to receive a dummy diploma with blue ribbons, may have invisible letters marking him as the special *protégé* of the faculty and the certain future incumbent of a vacant or specially-created chair. It is understood here that the favorite will readily obtain a dispensary position and a "professorship;" that next he will be found airing his anatomy as a demonstrator, and as the proprietor of a favored "quiz;" that, *presto!* the spring is touched, and the humble set of poor practitioners who knew him as a classmate—then not distinguished for anything in particular—look up to him standing on the dizzy heights of a full professorship. Here there are complaints of the overcrowded state of the profession in France, yet the bulletin board of the medical school contains at the present moment no less than ten different appeals from this or that mayor begging a doctor to come and settle in his locality, guaranteeing board, providing the indispensable *voiture*, and offering a stipend of from one to three thousand francs—this sum being over and above the receipts from practice. If a man chooses to work he is absolutely sure of success. There are numerous positions, salaried and desirable, open to any member of the French faculty; but for these there is first the inevitable *concours*.

Is it possible for us in America ever to have a better system? It is only by personal appreciation of the way medical matters are managed here and in Germany, even in England, that the shame and scandal of the way of doing similar things at home force themselves with effect upon the observer. This subject can never be old or trite until the disinterested part of the profession take matters in their own hands, and not merely demand but work reform. Here the profession is under governmental supervision, in governmental pay; a multitude of venerable forms appertain to it, and the machinery works with the ease and noiselessness that results when time wears away all points of friction. It is as idle as undesirable to wish for legislation on the subject in the United States. Congress has no proper concern with us, but reform is the proper function of the body of intelligent young medical men who must know and feel the disgrace that attaches to us from a system of education that permits a ploughboy or a day laborer, with the one single and only indispensable requisite of a little money, to take his seat on a bench to hear lectures on subjects the very terms of which fall on his ear as the words of a foreign language, and, after eight months—possibly of continuous real or nominal attendance—to be turned loose on society to practise on its infirmities, and to talk in bad English virtuously and indignantly against the quacks. Besides, it is against all reason that the annual spring tides of M.D.'s, fledged by the patent incubating process, are thrown, year after year, on the community, to diminish still further the absurd figure, 600, expressive of the number of people to which there is one physician. Who is benefited by this host of annual accessions—the hosts themselves? No. The booy of the profession? How many times has it happened that a new-comer in a locality settled and was doing fairly, with a constituency just sufficient to keep him so, when the next year one, two, or three fresh aspirants, direct from college, came to the neighborhood, spoiled his own business, and went on starvation rations themselves? Is the community at large benefited by new accessions to our ranks? In one respect only: the cheat, whose credit is exhausted everywhere else, can always find a physician to serve him without fee. Who then remains to be benefited by the spring hordes? The thousand professors who compose the faculties of the private speculations known as colleges. It seems that for these favored individuals everybody else must suffer. Many of these institutions are rich. They control all the patronage, so that necessarily eminent men belong to them as teachers. To speak the truth about them is not the way to preferment, but the majority of us had better make up our minds that we can't all be professors, and try for something that united action will make attainable.

I started to write about Paris medical matters, and have gone off riding a hobby instead. The fact that hospitals have their clinics and shows at eight or nine o'clock in the morning makes the effort to attend bad for lazy people. Fortunately I am located near that model of hospital structure, the new Hôtel Dieu, and most of my sight-seeing has been there. Richet, the crack surgeon, is getting old, and shows much shining pate. I never saw a man examine a case more thoroughly. Jolly little Kusco, or Cusco, him of speculum fame, I believe, handles women in a way that would excite execration at home, and which I can't believe is proper anywhere. To expose women from their feet to their breasts, without the comforting pretence of a sheet, and to punch their abdomens as if he was going to dig the uteri out through the walls, is not the way to make the examination chair a joy and delight. I saw one young woman of some personal attractions, and who seemed to have some modesty left, although she was a low class French woman, tremble as if in ague during the ordeal, and

shriek with pain when he forced his very short forefinger up to the cervix as if he intended to carry all before him. The benzine cautery is much used here. The most painful operation I ever saw without an anæsthetic was a sarcoma removed from the root of the neck. An incision was made around the base of the tumor, save that two little isthmuses of skin were left above and below until the growth had been severed from its connections beneath. These bands of tissue were burned across, and the vessels cauterized at the same time. Lastly the islands of skin were *burned* through. Save this last feature, the operation struck me as just the procedure for dangerous situations. But it had an unpleasant suggestion of the time they amputated with red-hot knives, and Ambrose Paré, could he have seen it, would doubtless have been scandalized at the abandonment of the ligature.

The most striking thing to a New Yorker about this hospital is the building itself. Save that palace for paupers—the new St. Thomas's Hospital in London—the Hôtel Dieu is unquestionably the finest structure of the kind in Paris or London. It contains at present only six hundred beds. A number are yet to be added, but it covers a much larger space than Charity or Bellevue, and in appointments and service is only rivalled by the new New York Hospital. I suppose our commissioners would give up the ghost if it were proposed to put up a building for a public hospital with the corridors and two immensely long covered galleries of fine dressed stone without a suspicion of plaster; where each one of a long line of stone columns must have cost a large sum; where a chapel of really tasteful architecture looks as solid as if it had been taken bodily from a part of *Notre Dame;* where a steam engine runs day and night to fan fresh air into the wards; where every appointment is of the most costly description; and where, last but not least, the patients are addressed as *messieurs* and *mesdames les malades.*

T. K. CRUSE.

PARIS, FRANCE.

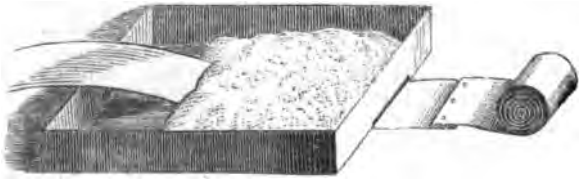
New Instruments.

TO PREPARE PLASTER-OF-PARIS BANDAGES.

By W. C. W. GLAZIER, M.D.,

NEW YORK.

I SEND an account and a drawing of a simple apparatus for spreading plaster-of-Paris on bandages while rolling them for surgical use; and which, when no other could be obtained in an emergency, I, as well as



some of my professional friends to whom I have recommended it, have found to answer the purpose admirably.

Taking a common pasteboard box, five inches wide by eight or more inches long and two inches deep—an ordinary envelope box will answer—make a slit close to the bottom of one end by removing a narrow strip one-sixteenth to one-eighth inch wide. The lower incision should be horizontal and on a level with the upper surface of the bottom of the box; the upper one should slant from without inward and upward. Fasten the box to a board or a table, covered with paper, by a tack through its bottom. Pass one end of the bandage of ribbed crinoline through the slit from within outward, throw on some plaster-of-Paris, then draw the bandage through the slit and roll it on the table as it is drawn out with the tips of the fingers, or pulling it to the extent of a foot or more with the palm of the hand. The amount of plaster can be regulated by pressing the end of the box inward with the left hand while the right pulls on the bandage.

By fastening the second bandage to the end of the first one, its end may be drawn through under the pile of plaster, and when through the slit may be separated by a pair of shears.

In most works on surgery the directions are to "rub the plaster in;" this applies to material other than crinoline, into the large meshes of which the plaster readily fall on being sprinkled over it.

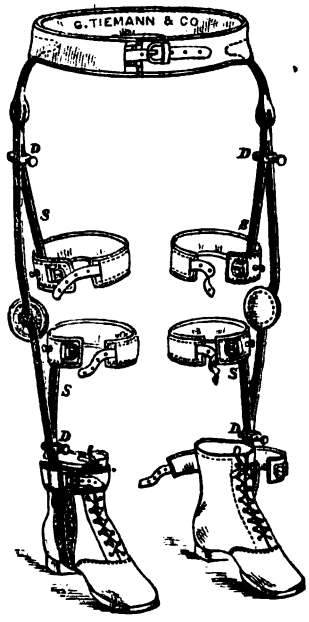
57 WEST 42d.

A NEW BRACE FOR THE CORRECTION OF CERTAIN DEFORMITIES OF THE LEGS.

By C. W. TRUEHEART, M.D.,

OF GALVESTON, TEXAS.

THE accompanying cut well illustrates a modification of brace for the treatment of knock-knees and similar deformities of the legs, which presents, I think, a new and valuable improvement, and possesses decided advantages over the forms of brace now generally in use.



The springs, s, s, s, s, the bearing of which can be delicately adjusted by shifting the slides d, d, d, d, up or down, are the characteristic feature of this apparatus.

The brace being attached, at the site of deformity on either side, by means of the springs, which fit

closely and firmly to the limbs, perfect coincidence and harmony of movement between leg and brace is secured, which is sadly wanting where the attachment is effected by means of the long straps of the ordinary brace.

The corrective force exerted is continuous, and in all positions the wearer may assume is decided and equable, while at the same time the articulations of the limbs have such a normal freedom of excursion—laterally as well as antero-posteriorly—that no disfiguring habit of gait is liable to be contracted by the patient, and there is no tendency to trip or fall; even the child of only a few years can wear the brace with little or no annoyance, and on first trial walk or even run with surprising ease and precision.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 28 to August 3, 1878.

SUTHERLAND, CHAS., Colonel and Surgeon. Granted leave of absence for nine months. S. O. 162, A. G. O., July 26. 1878.

TILTON, H. R., Major and Surgeon. Granted leave of absence for four months. S. O. 166, A. G. O., Aug. 1, 1878.

GARDNER, W. H., Capt. and Asst. Surgeon. Relieved from duty at Atlanta, Ga., and assigned to duty at St. Francis Barracks, St. Augustine, Fla. S. O. 15, Dept. of the South, July 28, 1878.

CRONKHITE, H. M., Capt. and Asst. Surgeon. Assigned to duty as Post Surgeon at Fort Brady, Mich. S. O. 136, Dept. of the East, Aug. 2, 1878.

WILSON, WM. J., Capt. and Asst. Surgeon. Assigned to duty as Post Surgeon at Fort Niagara, N. Y. S. O. 131, Dept. of the East, July 27, 1878.

CLEARY, P. J. A., Capt. and Asst. Surgeon. Granted leave of absence for one month. S. O. 134, Dept. of the Missouri, July 30, 1878.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.—Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 3, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.
July 27, 1878....	0	10	36	2	2	18	0
August 3, 1878...	0	11	40	1	5	23	0

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE, WASHINGTON, D. C., Aug. 3, 1878.

NATIONAL QUARANTINE REPORT.—Abstract of sanitary reports received during the week ending August 3, 1878, under the National Quarantine Act:

New Orleans.—Since report last week 158 cases yellow fever and 36 deaths have occurred, making in all 195 cases and 53 deaths to yesterday evening. There are now four principal points of infection, and these spreading, but Board of Health hope to control it.

One passenger landed Monday at Vicksburg, has since died of yellow fever; on Tuesday one case taken from hotel to hospital at Cincinnati with same disease—both from New Orleans en route for North.

Key West.—No new cases yellow fever four days to yesterday noon. No cases in port; two at Marine Hospital convalescent.

Quarantine Stations.—Many vessels arriving at quarantine stations on Atlantic from Cuba bring cases of yellow fever—a common yearly experience.

Havana.—One hundred and twenty-nine deaths from yellow fever and thirteen from small-pox, week ended July 20.

Matanzas.—No abatement of yellow fever or ratio of deaths, week ending July 26.

Calcutta.—Fourteen deaths from cholera, week ending June 1.

Bombay.—Thirty-three deaths from cholera during two weeks ending June 11.

Constantinople.—Bulk of Russian Army encamped on unhealthy low lands has removed to healthier camping grounds, and most of the refugees in city have gone to Asia Minor and Syria—about 80,000 remaining—since which the typhus, small-pox, measles, scarlet and enteric fevers, which prevailed so extensively near close of war and since cessation of hostilities, have greatly diminished (July 12th).

The epizoötic prevails extensively among the cattle of Asiatic and European Turkey.

Reports from other places indicate good health.—JNO. M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

TREATMENT OF WHOOPING-COUGH.—MM. Louvet-Lamare and Constantine Paul recommend very highly the use of the drosera rotundifolia in the treatment of whooping-cough. They treat the bronchitis of the first period with bryonia, and give the drosera as a sedative for the cough in the second period. They use the tincture, giving from ♏ xv. to ♏ lxxv. daily. M. Louvet-Lamare recommends also muriate of ammonia in the treatment of a frequent complication, viz., an inflammation limited to the lower part of the pharynx, the larynx, and the upper part of the trachea. This inflammation is attended by a slight rise of temperature, and is characterized by a virulent, tearing cough, for which the physical examination of the chest affords no explanation. He gives about seven grains a day to a child of seven years.—*Lyon Médical*, June 16th.

TREATMENT OF PSORIASIS UNIVERSALIS.—In the treatment of this very obstinate affection Prof. Kaposi claims to have obtained very favorable results from the use of inunctions with cod-liver oil, baths, and rubber bandages. Sometimes the inunctions produced a very troublesome eczema, and they had to be discontinued. In such cases the continuous bath and envelopment of the part in bandages smeared with diachylon ointment proved serviceable.—*Centralblatt für Chirurgie*, No. 24.

TREATMENT OF ASTHMA BY IODIDE OF POTASSIUM SPRAY.—Dr. Evrard, of Orsennes, has obtained very satisfactory results, in a severe case of asthma, from the use of a spray of iodide of potassium. The patient, a man 30 years of age, had suffered for eight months from daily attacks of asthma, and had also been subject to chronic bronchitis for five years. At the time the treatment was begun, he had three or four attacks a day, and was reduced to a pitiable condition. After assiduous use of the spray for eight days, the asthmatic attacks had almost entirely ceased. Eighteen months have elapsed since then, but the patient has

continued to use the spray, and the attacks have not recurred. The strength of the solution used was 1 to 20. The *séances* of inhalation were short, but frequently repeated; the quantity of the drug thus administered by the bronchi being about the same as that given internally by Prof. Sée.—*Jour. de Méd. et de Chir.*, June.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.—The officers elect for the year 1878–79 are: *President*, Henry D. Noyes, New York; *Vice-President*, William F. Norris, Philadelphia; *Secretary and Treasurer*, R. H. Derby, New York; *Publishing Committee*, R. H. Derby, D. B. St. John Roosa, E. G. Loring.

THE AMERICAN OTOLOGICAL SOCIETY, at its ninth annual meeting held in Newport, R. I., on July 24th, elected the following officers for the ensuing year: *President*, Albert H. Buck, of New York; *Vice-President*, Charles H. Burnett, of Philadelphia; *Secretary*, J. Orne Green, of Boston.

CAFFEINE AS A DIURETIC.—Prof. Gubler asserts that caffeine and the other alkaloids analogous to it, such as theine, mentheine, etc., are excellent diuretics. They act very rapidly, and are particularly useful in cases where other medicaments can no longer be tolerated. He gives these alkaloids in doses of from four to eight grains a day. The following formula is the one usually employed by Prof. Gubler:

℞. Caffeine (or theine or mentheine)... gr. vijss.
Syrup. menthæ..... ʒ j.
Aquæ melissæ..... ʒ ijss.
M.

—*Le Progrès Médical*, June 15th.

ADMINISTRATION OF OPIUM TO CHILDREN.—In the lectures of M. Simon, recently published in the *Progrès Médical*, we find some convenient formulas for the administration of opium to children. According to M. Simon one often meets with girls from six to eight years of age, who are already dyspeptic and nervous. Many of them suffer from gastralgia. In addition to a general tonic treatment, and appropriate moral and physical hygiene, a preparation like the following may be prescribed with advantage:

℞. Tinct. colombo..... ʒ ijss. (10 gms.)
Tinct. belladon..... ♏ lxxv. (5 ")
Tinct. aconiti..... ♏ lxxv. (5 ")
Tinct. camphor. comp.... ♏ lxxv. (5 ")
M.

Dose, from five to ten drops before each meal.

In affections of the respiratory passages, particularly when they possess a spasmodic character, which indicates the important part played by the nervous element, belladonna and aconite will render valuable services. For children over two years of age a little opium may be added:

℞. Tinct. belladonnæ,
Tinct. aconiti rad.....ää ♏ lxxv. (5 gms.)
Vini opii..... gtt. v.
M.

Dose, three drops morning and evening, which may be increased by a drop a day.

Or the following formula, which is more convenient, may be employed:

℞. Syrup. codeini (Fr. Ph.),
Syrup. belladon. (Fr. Ph.). ää ʒ xijss. (50 gms.)
M.

Dose, a teaspoonful to a dessertspoonful *per diem*.

PURGATIVE MILK.—In his book on *Le lait, La crème et Le beurre*, M. Husson calls attention to Planche's formula for purgative milk, a cathartic which has the advantages of being easy to take and certain in action:

℞. Resinæ scammoniæ....grs. vi. (40 ctgms.)
Sacch. albæ..... ʒ ijss. (10 gms.)
Trit. et ad. gradatim:
Lactis puri..... ℥ vi. (100 ")
Aq. laurocerasi..... ♏ xlv. ʒ i. (½ ")
M.

A single dose for an adult.

—*Jour. de Méd. et de Chir.*, June.

STILBEINE, A PREPARATION FOR CLEANSING INSTRUMENTS.—This handy preparation is simply a combination of rubber and impalpable emery powder. It comes in tablets of the shape and size of the ordinary rubber eraser. It removes rust and blood-stains, etc., immediately, and without scratching or soiling the instrument. All that is necessary is to rub the instrument with the composition, when it rapidly acquires a brilliant polish.—*Année Méd.*

TREATMENT OF FURUNCLES BY ARNICA.—Dr. Planat, of Nice, claims that arnica has the power of aborting an eruption of boils, except when due to diabetes, with extraordinary rapidity. His method of employing it is very simple. In order to render its action on the small vessels more energetic, he applies it directly to the inflamed spot in the form of an ointment, of which the formula is as follows: Extract of fresh arnica flowers, ʒ ijss., honey, ʒ v. If the mixture be too fluid, he adds powdered lycopodium or althæa, or some other inert powder, until it acquires the proper consistency. It is then spread pretty thickly on a bit of oiled silk or diachylon plaster, and applied directly to the boil. It is rarely necessary to renew the dressing more than once in twenty-four hours. As a rule, two or three dressings are enough to make the furuncle abort, no matter what be the period of its evolution.

A curative action is also obtained by the internal administration of the drug. Dr. Planat gives from three to four drops of the tincture, largely diluted, every two hours, and he has seen the furuncular eruption disappear very rapidly under the treatment.—*Jour. de Méd., etc., de Bruxelles*, May.

EXCRETION OF ALBUMEN IN THE URINE OF HEALTHY PERSONS.—Prof. Leube has found that albumen frequently appears in the urine of persons who apparently are in the enjoyment of perfect health. He found it in four per cent. of persons who had not been subjected to any severe corporeal exertion, and in sixteen per cent. when the evacuation of urine was preceded by a few hours of bodily labor. The quantity of albumen excreted varied from 0.04 to 0.07 per cent.—*Allg. Med. Cent. Zeit.*, No. 48.

GEOGRAPHICAL DISTRIBUTION OF THE TAPEWORM IN SWEDEN.—The cestoideans of men have hitherto been relatively little studied in Sweden, but there, as well as in other European countries, special peculiarities seem to exist in the geographical distribution of the different varieties. According to the statements of Prof. Hedenius, of Upsala, the tænia solium predominates in Southern Sweden, while in Norrland and Upland the bothriocephalus latus is chiefly met with. In the collection of the Pathologico-anatomical Institute, in Upsala, the specimens obtained from the town and surrounding country are almost exclusively of the latter variety. Prof. Hedenius has only met with the tænia medio-canellata once in Upsala.—*Deutsche Med. Wochen.*, No. 23.

Original Lectures.

LEUCOCYTHÆMIA—APOPLEXY AND HEMIPLEGIA—CARCINOMA OF STOMACH.

A CLINICAL LECTURE DELIVERED IN BELLEVUE HOSPITAL,

By AUSTIN FLINT, M.D.,

PROF. OF THE PRINCIPLES AND PRACTICE OF MEDICINE AND CLINICAL MEDICINE IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE.

[Reported for The Medical Record.]

LEUCOCYTHÆMIA—LEUKÆMIA—PERNICIOUS ANÆMIA—DIAGNOSIS—PROGNOSIS—INDICATIONS FOR TREATMENT.

Gentlemen:—This case belongs in a group of cases which are of much interest and importance, as well as of much obscurity. In the group of cases to which I refer, the most prominent feature is a persistent, progressive, and generally fatal anæmia.

Some forty or fifty years ago, Dr. Addison, whose name is connected with one of the forms of disease belonging to this group, gave a very graphic description of what he termed "idiopathic fatal anæmia." He also described certain cases of idiopathic anæmia characterized by a dark discoloration of the skin—that form of discoloration of the skin familiarly known as Addison's disease.

Some thirty years ago, Virchow, of Berlin, and Bennett, of Edinburgh, described an affection to which they gave the names leukæmia (Virchow), and leucocythæmia (Bennett). The cases also which those observers described belong to this group. Both of these gentlemen called attention particularly to the fact that in the cases to which they alluded there was a marked increase in the number of the white corpuscles in the blood, together with a marked diminution in the number of red corpuscles.

The alterations with reference to the corpuscular elements of the blood in this disease are very great. In extremely marked cases, the proportion of white to red blood-corpuscles is reduced to one in twenty, whereas in health the number of red blood-corpuscles vastly exceeds that of the white.

Subsequently it was found that certain cases presented the general characteristics of leucocythæmia, but in them this change in the blood was not observed. To this class of cases the same observers applied the name "pseudo-leucocythæmia" and "pseudo-leukæmia." They also are characterized by progressive and marked anæmia.

Something over forty years ago Dr. Hodgkin described a class of cases in which there was a notable enlargement of the lymphatic glands throughout the body. He was the first to call attention to that feature, and the disease is now known under the name "Hodgkin's disease."

In this disease also the most prominent feature is anæmia, marked in degree and progressive.

There is, then, a group of cases which has one common feature, and that is a *progressive and persistent anæmia*. There is a certain degree of analogy between these cases, although they differ in some respects. Concerning either one of these affections belonging to this group, our pathological knowledge is incomplete, and just how far they are identical and in what essential particulars they differ, is now difficult to say.

We have before us a case to which the name leucocythæmia can be applied, and by means of the microscopes now ready to be passed around, you will be able to observe the blood and see the predominance of the white corpuscles.

Within the last few years a class of cases has been described under the term "pernicious anæmia." It is termed pernicious to distinguish it from cases of anæmia, common enough, which do not possess, as a rule, any very great gravity, and in which the affection of the blood is usually amenable to appropriate treatment.

Cases of leucocythæmia differ in the following respects: in some cases there is notable enlargement of the spleen; in other cases there is notable enlargement of the lymphatic glands in different parts of the body. Some, therefore, have divided the cases of leucocythæmia, and have made a division based upon these points of difference.

But we meet with cases of pernicious progressive idiopathic anæmia in which we do not find leucocythæmia; neither enlargement of the spleen, nor enlargement of the lymphatic glands, in which, in fact, all that is discovered is the existence of the anæmic condition. It so happens that such a case came under my observation a few days ago, and at the autopsy nothing was found by which the anæmic condition could be explained.

I will next read the history of the case before us this afternoon: The patient's name is Smith, and he is sixty-one years of age. He is a machinist by occupation, and was admitted to the hospital nearly two months ago. His father died of consumption; his mother of old age. He has three sisters and one brother, but there is nothing specially notable in their medical history. The patient has been a hard-working man, and also a hard drinker. Some years ago he had gonorrhœa, but there is no syphilitic history. He had acute articular rheumatism when nineteen years old, and was confined to the bed three months. He has never had a second acute attack, but has had several subacute attacks of the same disease. He had three attacks of intermittent fever when a young man. About *three* years ago he began to feel unusual fatigue after *ordinary* exertion. He was troubled with slight dyspnœa on going upstairs, and his feet were somewhat œdematous. Although the anæmic symptoms were progressive, he kept at work until about *fourteen* months ago, when he first noticed a peculiar enlargement of the abdomen. A hard, ridge-like enlargement was found occupying the upper portion of the abdomen, to the left of the median line. There was some pain over the tumor. He had never had any pain over the region of the liver. The patient ceased work on account of increasing debility and dyspnœa. He became slightly jaundiced. He has never had any hemorrhages, nor vomiting, nor diarrhœa, nor bronchitis. He has had considerable œdema of the feet, but to some extent that has disappeared. He has not had general dropsy. There has been some febrile movement at night. The items of special interest in the clinical history of the case at present are dyspnœa, œdema of the lower extremities and general debility, together with a marked increase of the relative number of white blood-corpuscles and a corresponding diminution of the red corpuscles. His bowels are constipated. There is no albumen in the urine. There is a marked enlargement of the spleen, and the lymphatic glands in the groin are also somewhat enlarged. The heart is displaced upward, the lungs are normal, and the liver is very slightly increased in size.

As we look at the patient we see that his face presents a distinctly anæmic appearance, with a slight tint of sallowness. From the appearance of his face we

might naturally suspect that he is the subject of malarious cachexia. Directing attention to the abdomen, I feel very distinctly the margin of a solid tumor; there is a sense of resistance when pressure is made, which indicates the presence of a solid body. The long diameter of the tumor extends from the upper border of the spleen to the pelvis. By manipulation, the *hilus* of the spleen can be recognized. The apex of the heart is beating in the *fourth* intercostal space, and a little to the left of the normal position. There is a systolic murmur in the arteries.

TYMPANITIC RESONANCE CONVEYED BY A SOLID ORGAN.

I will here take occasion to remind you that tympanitic resonance can be conveyed to some distance by a solid organ. This is very well illustrated in this case. As you see, the margin of the tumor can be distinctly made out by palpation; but, as I make percussion, the tympanitic note obtained upon the right side of the abdomen is conveyed to a considerable distance beyond the border of the solid body. This is an important point to be taken into consideration in determining whether any change has taken place in the size of the solid organ. We have to deal then, in this instance, with a distinct case of leucocythæmia with marked enlargement of the spleen. It is, therefore, a case of the *splenic* variety of that affection.

There is much that might be said with reference to the pathology of the disease, but I will simply say that, in view of the leucocythæmic condition of the blood, we naturally enough direct our attention to those organs in which the formation of red blood-corpuscles takes place. The spleen is believed to be one of those organs. Our knowledge as to the exact manner in which the red blood-globules are formed is yet for the most part theoretical.

It is most important and interesting to the patient to know what is to be done, and how much can be done towards effecting a cure. In a clinical aspect, the indications for treatment are distinct. Our object is to develop an appetite and promote digestion and assimilation, for the purpose of improving the condition of the blood.

These are the plain indications for treatment. Cases of this kind, as a rule, steadily progress, no real improvement taking place. Prognosis is very unfavorable. Yet it is proper, as far as possible, to follow out the evident indications. Chalybeate tonics may be used, with the hope that they may in some way contribute to the formation of red blood-corpuscles and a corresponding diminution of the white corpuscles. The termination of these cases is by gradual or rapid asthenia, or by syncope.

By way of diagnosis, I will remark that the general condition of the patient characterized by progressive anæmia is suggestive of malignant disease. Taking into view the infrequency of leucocythæmia, we should examine all parts of the body with special reference to the existence of carcinoma. The anæmia, the dropsical effusion, and the general debility are all consistent with the existence of malignant disease, and when we are able to exclude this condition, our attention may be turned towards anæmia pernicious in character. I think cases of leucocythæmia with propriety may be embraced under the general term pernicious anæmia.

APOPLEXY AND HEMIPLEGIA—CAUSES—DIFFERENTIAL DIAGNOSIS BETWEEN CEREBRAL HEMORRHAGE AND EMBOLISM—INDICATIONS FOR TREATMENT—NOTABLE SYMPTOMS.

We will now turn our attention from this subject to one quite different in character, which will be illustrated by this case.

We have here a case of hemiplegia following an attack of apoplexy. The patient is a widow, 70 years of age, a domestic, and was admitted to the hospital on the 22d inst. No family or personal history can be obtained. She was quite well up to the morning of the 21st, when, while sitting in a chair, she suddenly became unconscious, fell to the floor, and was found to be paralyzed upon the right side, and unable to speak. She was unable to swallow, and this is a feature of the case which is interesting and unusual. Of course a patient in intense coma may not be able to swallow, but when the coma subsides the power of deglutition returns. In this case, even after the patient has recovered to a certain extent, there is great difficulty, almost amounting to inability to swallow.

Her condition remained unchanged until admission. When admitted she was in a semi-unconscious state, and the right side of her face, her right arm, and her right leg were paralyzed. There was more motion in the leg than in the arm, which is the rule unless both are completely paralyzed. There was marked rigidity of the right arm and leg, and sensation was notably impaired upon the right side of the body. The right eye was not so closely shut as the left, and was suffused and congested. The right cheek was more flaccid than the left, and the right corner of the mouth was lower than the left. The patient did not speak, but seemed to comprehend some words which were spoken to her.

She was unable to put out her tongue, but would make an effort to bring it out with the left hand. She continually put her hand to the side of her head, as if in pain. This point is important as bearing upon the cause of the hemiplegic condition. The pulse was slow, the respiration normal, and the temperature 100° F. Her nutrition was good. The liver and spleen were normal. No signs of general bronchitis were present. The patient yawned, a thing that not unfrequently occurs with patients with various cerebral affections. The urine was normal.

The treatment consisted in the administration of two drops of croton oil, which produced two free evacuations from the bowels, and the introduction of milk and whiskey into the stomach by means of the stomach-pump. She also received *three* nutritive enemas at intervals of four hours. The first was not retained. Half an hour before the second was given a suppository containing tannic acid was used, and the remaining nutritive enemas were retained.

On the 22d inst., at 7.30 P.M., the temperature in the right axilla was 100° F.; in the left axilla, 97¾ F. There is no special important practical conclusion to be based upon this, but it is a noticeable clinical fact. At 9 P.M. the temperature in the right axilla was 100° F., and in the left, 95° F.; at 11.30 P.M., in the right axilla the temperature was 97° F., and in the left, 95° F. On the 23d, morning, right axilla, 100¼° F., left axilla 99° F.; at 5 P.M., right axilla, 100° F., left, 98° F.; at 8.30 P.M., right axilla, 99° F., left, 98° F.; at 11 P.M., right axilla, 98¼° F., left, 98° F.

From the record it is seen that the temperature was raised upon the *affected* side as the result of the paralysis. Bowels constipated. Urine drawn with catheter.

On the 24th inst., patient in about the same condition as on the day previous. The same difference in the temperature upon the two sides of the body continued. On the 25th inst., the temperature in the right axilla, in the morning, was 100° F., and in the left, 98¼° F. In the evening of the same day the temperature in the right

axilla was 99° and 97° F., while upon the unaffected side the temperature in the axilla rose to 100° and 100¼° F. Here was a distinct elevation of temperature upon the *unaffected* side. On the 26th inst., the temperature in the right axilla was 99¼° and 98¼°, while upon the left side it was 100¼°, 100°, and 98¾° F.

Thus, you see, there was, up to yesterday evening, an elevation of temperature upon the affected side, but then there was exactly the reverse; the temperature upon the affected side was falling to a trifle below the normal and upon the unaffected side rising as high as 100¼° F.

There are points in this case which possess a certain amount of interest, and I shall direct your attention to this question: What is the cause of the apoplectic seizure, and of this paralysis? In attempting to answer that question, we must first place before our minds the different conditions which may produce apoplexy and hemiplegia. We are limited in the answer to this question by the fact that we have apoplexy followed by hemiplegia. That fact enables us to exclude certain causes of apoplexy without hemiplegia. For example, we are able to exclude meningeal hemorrhage, which would produce apoplexy, but not necessarily hemiplegia. In fact, the differential diagnosis in cases like this resolves itself into the almost exclusive consideration of *two* conditions. The various affections which might cause coma more or less gradually are readily excluded. We can throw out of consideration meningitis, tumor, and probably thrombosis.

The two conditions between which we are to decide are these: embolism and cerebral hemorrhage.

Let us consider what the points are in this case which favor the one or the other of these conditions.

In both the attack occurs suddenly. In both loss of consciousness may be absolutely complete. In both we expect the occurrence of hemiplegia. In the first place, embolism involves, as a rule, the existence of cardiac disease or the formation of thrombus in the heart. It is therefore important to determine whether or not disease of the heart is present. In this case there is no disease of the heart represented by physical signs. That is one point against embolism. The age of the patient is another point against embolism. Embolism, it is true, may occur at all ages, but it is more likely to occur in early or middle life, whereas cerebral hemorrhage occurs only rarely in middle or early life, but, in the very great majority of instances, after the middle and in the later periods of life.

Does the fact with reference to the side upon which the hemiplegia occurs have any bearing upon this question? It is of some assistance. In much the larger portion of cases, when the hemiplegia proceeds from embolism, it affects the right side of the body.

In a considerable proportion of cases, hemiplegia produced by cerebral hemorrhage is upon the right side of the body.

Again, it has now been *five* days since this patient had her apoplectic seizure. In most cases of sudden loss of consciousness and hemiplegia from embolism, there is a more distinct improvement as regards intelligence and paralysis than has taken place in this case. The fact, then, that this patient, after this number of days, has regained only in so limited a degree her mental power, and has improved so little, if at all, in her paralysis, is very strong evidence in favor of cerebral hemorrhage and against embolism. These are the more important points which are involved in the question of differential diagnosis. The conclusion which we reach, then, is this: that in all probability we have to deal with a case of apoplexy and hemiplegia produced by cerebral hemorrhage. There is another point, but I am not sure that we can bring it to bear very strongly in this case; perhaps we can to some extent. If we have hemorrhage in the brain, we have a clot formed. This clot constitutes a foreign body and excites around it a certain amount of circumscribed inflammation. Consequently there is likely to be some pain referable to the head, if the patient is conscious of it. In this instance it is a fair presumption that the patient has had some pain, for at one time she indicated it by carrying the left hand to the head very frequently. Moreover, with this circumscribed inflammation about the clot, there is likely to be some fever as indicated by the temperature and the pulse, and occasionally slight delirium occurs. When these symptoms are present they seem to me to point to cerebral hemorrhage in contrast with embolism. In this case we find that there has been elevation of temperature upon the *unaffected* side of the body. There has been elevation of temperature upon the affected side, but the effect of the paralyzed condition is to increase the temperature; hence, we cannot take it as evidence of inflammatory action, but when it occurs upon the unaffected side, we can, perhaps, take it as evidence of increased temperature produced by inflammatory action.

These are the points which go to corroborate the diagnosis of apoplexy and hemiplegia produced by cerebral hemorrhage. I will add that the indications for treatment are very simple. The patient is to be nourished, and this is being done by the introduction of food into the stomach and the rectum. Proper palliative remedies may be used as the symptoms indicating their employment may arise. When recovery has taken place to a certain extent, the object of treatment will be to cause return of will-power through the paralyzed muscles.

[The case was presented two weeks later. There was considerable improvement. The patient could swallow and had considerable control over the affected lower extremity, with a moderate amount of control over the upper extremity. She had recovered from the immediate effect of the extravasation. Aphasia was apparently complete.]

CARCINOMA OF THE STOMACH. — PROBABLE ULCERATION.—INDICATIONS FOR TREATMENT.

The next case which I present to you is J. B., æt. 40, a carman, and he says he has been sick five or six months. On questioning him, we find that his chief ailment relates to the stomach. He has had pain, which he refers to that region; not severe, but a dull, heavy pain. He has vomited almost daily during the time in which he has been sick; he has vomited from one to two hours after taking food; he has never vomited blood; he feels distress in the stomach after taking food, and feels a sense of relief after the vomiting has occurred. He has lost in weight between thirty and forty pounds.

Vomiting, in the first place, occurring in a man, and, in the second place, persistently, as in this case, implies some affection of the stomach. In young subjects, especially women, vomiting may persist for a very long time, and yet be purely a functional affection.

What this patient says relative to the occurrence of vomiting at a certain time after the ingestion of food, and the act of vomiting being followed by relief, is a fact of considerable importance. The natural interpretation is this: there is a condition of the stomach which renders it unduly susceptible to the presence of aliment. It occasions distress while it re-

mains in the stomach; but when, finally, vomiting has been excited and the offending material has been removed, there comes a sense of relief. Such symptoms point to ulcer of the stomach. In acute gastritis or even in chronic gastritis, if vomiting takes place after taking food, it occurs more quickly than in this case.

The aspect of this patient is not that of an unhealthy man. What we are to look for in such a case as this is either ulcer or carcinoma. If carcinoma, ulceration is likely to be a concomitant. Upon what are we to base our diagnosis? We are to depend upon what we discover by manual examination. If we are unable to find any tumor which we can refer to the stomach, the probabilities will be in favor of gastric ulcer. If, on the contrary, we do find a tumor that can be connected with the stomach, taking this history as given to us by the patient, we may make positive diagnosis of carcinoma of the stomach with ulceration. We say carcinoma with ulceration, because the distress and vomiting after taking food, relate to the ulceration, which is concomitant to the carcinoma.

Physical examination.—It does not require much examination to determine that this man has an abdominal tumor which is not at all desirable. It can be isolated completely from the liver. It is rather movable. It is lobulated. It is in the neighborhood of the pylorus. The mobility of such tumors depends upon the extent to which attachments have been made to the surrounding parts. Associating what we find here with the history of the case, we need feel no hesitancy in making the diagnosis of carcinoma of the stomach.

With reference to treatment, it is merely palliative. Pain in this instance is a symptom to be palliated; so also is the vomiting. I should say, prescribing for the patient as now presented, that some form of opium is indicated. I prefer to use codeia, for the reason that it is much less liable to produce disagreeable after-effects than are some of the other preparations of opium. I should recommend, therefore, that this man take ¼ of a grain of codeia twice a day.

PRACTICAL OTOLOGY:

BEING CLINICAL LECTURES DELIVERED AT THE NEW YORK EAR DISPENSARY.

By SAMUEL SEXTON, M.D.,

NEW YORK.

I.

ACCUMULATIONS WHICH OBSTRUCT THE EXTERNAL AUDITORY MEATUS.

The accumulations which are frequently found in the external auditory meatus, not including foreign bodies proper, osseous growths, or tumors, are often a source of painful anxiety to physicians, especially when efforts, at their removal are unavailing, and I hope therefore, that an attempt, however much it may fall short of the end in view, to extend to others the results of my own clinical experience, may be well received and, perhaps, also somewhat improve the present mode of treatment in these cases.

It will be instructive to first give the etiology of this affection.

ETIOLOGY, ETC.

These accumulations are found at all ages. They are, perhaps, slightly more frequent in men than in women; and they are quite common in childhood. Indeed there are very few persons who, at some period or other of their lives, have not experienced greater or less inconvenience from this cause.

It has long been known to otologists that accumulations in the external auditory canal are frequently associated with other abnormal conditions, but I am fully convinced that more thorough observations will prove that such collections are almost invariably the sequence of definable diseased action elsewhere. A more careful observance of these conditions, will, I am persuaded, enable us to inaugurate more successful methods of treatment than exist at the present time, especially as regards their prevention.

The symptoms which will be found most prominent in the greater number of these cases is hyperæmia, and I shall now endeavor to describe the circumstances under which it is developed.

Hyperæmia of the ear may depend upon numerous remote causes, but I shall only refer to those which concern us most. In general, it may be stated that strong mental action, and the use of alcoholic beverages, play an important part in increasing cerebral circulation, and in inducing a state of hyperæmia of the ears. Men are more subject to these conditions than women, and they are likewise more exposed to cold, which facts would tend to confirm the statement that men are more frequent sufferers than are women. The more important causations are now to be mentioned.

Perhaps the most frequent one, in adult life, is an increased action of the heart, although I would not be understood as limiting it to that period. Every one has observed the flushing of the face and auricles when under excitement the heart's action is increased. The aurist is familiar with the everyday statements of patients that they experience "burning in the ears" as well as "throbbing of the heart;" and that the "ears itch," so that it is with difficulty they restrain from violently scratching the meatus with pins or anything convenient to use for the purpose.

These symptoms are indicative of hyperæmia of the ear.

Irritation of the nerves in sympathetic relation with the ear, especially of the mouth and pharynx—is a cause of hyperæmia, and may even set up a genuine inflammation. * Thus the act of dentition; caries of the teeth; ulcers of the mouth or pharynx; enlarged tonsils; naso pharyngeal catarrh; ulcers and polypoid growths in the nose, etc., conditions constantly met with, are causes of a hyperæmia, which, when long continued, lead to serious alterations in the nutrition of the parts affected. Results of this altered action of the part are increased secretion of the cerumen and exfoliations of the epidermis, two principal constituents in the accumulations found in the locality we are describing.

With this brief account of some of the causes of accumulations we will pass on to others, namely:

Inflammatory affections of the middle ear and external auditory meatus. Inflammations of the middle ear seldom fail to induce hyperæmia or even inflammation of that portion of the external meatus, immediately connected with it by continuity, and the inflammatory affections of the meatus itself have even a greater tendency to produce accumulations which obstruct the canal to a greater or a less degree. Otologists have frequently observed this fact. In one hundred and sixty-five ears from which Toynbee removed

* *Vide* paper read before the Med. Soc. of London, Jan. 29th, 1877, on Some Sympathetic Ear Symptoms, by Dr. E. Woakes.

accumulations, only sixty were free of other aural disease.

I have recorded a case of acute purulent inflammation of the middle ear where there was a proliferation of a white humid mass, of a texture resembling macerated epidermis, which formed so rapidly as to completely fill the inner half of the meatus in twenty-four hours. I was unable to remove it by syringing and had to tear it away by piecemeal with forceps. It reformed several times. This was in very hot weather. The discharge was not great but there was considerable pain. The patient was a woman and was nursing her child during the attack described. The inflammation came to a satisfactory conclusion. She had previously suffered from a purulent inflammation of the same ear.

The free growth of hair in the meatus, which is found most frequently in those beyond middle life—usually confined to men—furnishes a nidus for accumulations, as it prevents the escape of flakes of cast-off epidermis and cerumen.

Operatives in dusty employments are subject to accumulations in which dust is found to be an important part. Every ablution in these cases increases the obstruction by the addition of a little soap and water to the mass.

Foreign bodies furnish the nucleus for accumulations in numerous instances. Their presence is an excitant to the secretory function of the integument of the meatus, and they also prevent the escape of the flakes of dried cerumen as they form. The imprisoned object may consist of a pledget of wool or other substance, introduced to convey a medicament, or to protect the ear from the atmosphere, and carelessly allowed to remain until its presence is forgotten.

Or vermin may become lodged in the meatus, and being unable to escape, remain to be surrounded by accumulations. I have thus found the bodies of various insects. It is not an infrequent amusement of childhood to put into the meatus cherry pits, grains of corn, peas, beads, beans and the like, which may remain for years quietly embedded in the accumulations which their presence attracts.

The Exanthemata, as is well known, are often followed by aural disease—the hyperæmia and inflammation from this cause are of course the same as from the causes previously mentioned. I have observed large accumulations arising in young children from this source.

Inspissated pus and other products of chronic purulent inflammation of the middle ear may contribute to these formations, but when the discharge is abundant it keeps the canal free.

Such, in brief, are the more frequent causes of accumulations in the external auditory meatus. When the drum-head is absent the tympanic cavity is also likely to be occupied by the collection.

They may remain for a lengthened period without attracting the patient's attention, and be the occasion of more or less damage to the organ of hearing. A more frequent inspection of the ear should be made than is the custom, especially in children. I have known the presence, in the meatus of a child, of a small collection of desiccated epidermis, thrown off during an attack of subacute aural catarrh of the middle ear, to produce so much suffering from the sympathetic cough induced as to excite the suspicion that pneumonia existed. As soon as the hard irritating particles were removed from the ear the patient recovered.

I will now consider the accumulations themselves.

CHARACTER OF THE ACCUMULATIONS.

The appearance of accumulations will vary according to their character and the stage of the process.

After inflammations of the middle ear the inner extremity of the meatus will always be found to have been involved, as the integument in that locality is far more delicate than in any other portion of the canal. We have here to deal more especially with non-suppurative inflammations, and in them we shall find the epidermis loosened and more or less humid where it joins the drum-head. This condition will often be found when the catarrh of the middle ear has been so slight as to pass unnoticed by the patient. Frequently there will be an admixture of cerumen in these exfoliations. In some cases where a sympathetic hyperæmia exists in the meatus it will be filled by a *soft pasty exudation*, which has a tendency to rapidly reform as long as the exciting cause remains active. There is but little cerumen in this variety, and it is of a light cream color.

Not infrequently, when this exudation is only thrown out temporarily, it becomes *very hard*, forming an incrustation upon the walls of the meatus. This friable substance is attended with itching as it begins to fall off in particles. A patient, subject to accumulations, informed me that during one attack, similar to the last described, the particles, as fast as formed, flew off with such violence as to be carried some distance away from the meatus.

Mould is quite often found upon the walls of the meatus, usually springing from a light deposit of cerumen which is spread over the canal.

Several varieties of aspergillus have been discovered under these circumstances, their growth depending upon humidity and warmth, conditions favoring fungoid development elsewhere.

Soft cerumen in small quantities is found upon the walls of the meatus of most people, and if undisturbed it undergoes gradual desiccation and falls out of the meatus unobserved. Where it has been secreted in slight excess, and where the meatus was large enough to receive the finger or some object used to wipe it out I have observed the cerumen spread over the walls by the wiping process until it adhered as a hard coating, which could not be removed without bringing away portions of the underlying epidermis. This soft cerumen, however, frequently collects in the meatus in such quantity as to completely fill it from the drum-head or near it to within ten or fifteen millimetres of the outlet. Its consistence will allow the ready passage through it of a probe or curette. *Inspissated cerumen* is the term usually applied to this mass. Hard, *desiccated* masses are formed by the complete evaporation of the aqueous constituent of the collection. They are usually dark in color, and appear polished when seen from without.

Blake describes an accumulation, which he considers to be either an exudation or proliferation, characterized by the difficulty experienced in its removal. I have met with two or three of these cases and can fully confirm all that Blake so well describes.* The cause of this dense pasty mass is not clear.

But, whatever the nature of the accumulation, it will be found to contain more or less epidermis; sometimes, indeed, layer after layer of exfoliations will be found in a mass, which after removal, has been allowed to macerate in warm water. Of course, from what has been said in describing the origin of accumulations, we may expect occasionally to find them to contain hairs, pus, foreign bodies, etc.

* Vide Archives of Clinical Surgery, New York, June 15, 1878.

DURATION OF COLLECTIONS.

The collections found in connection with catarrhal inflammations of the middle ear, consisting of exfoliated epidermis, or soft cerumen, or both combined, begin to form simultaneously with the inflammation, but are frequently unobserved at first. It is after adult life that most of the prominent collections are found, the hard, desiccated variety being observed mostly in the aged, where the drying goes slowly on until the plug has an almost metallic density.

SYMPTOMS OF THE PRESENCE OF ACCUMULATIONS.

The hard exfoliations and exudations found in the meatus produce itching and more or less pain; they, moreover, are liable to reflexly excite cough.

The soft exudations and cerumen, when abundant, are described by patients as giving the ear a "stuffy" feeling and "muffling" hearing.

The presence of mould sets up, sooner or later, considerable irritation of the meatus, including, sometimes, an inflammation of the middle ear.

The pasty exudation seems to occasion distress by the accumulation pressing inward as it increases.

It is when these accumulations, filling the canal, of whatever nature, become disturbed from any cause, that they occasion much distress.

Impaction of accumulations. The repose of such a collection as last described is, sooner or later, doomed to a violent interruption. This accident usually results from water entering the meatus while the patient is bathing—and notably in the Russian bath—or from the introduction of a finger or the roll of the napkin in the subsequent endeavor to cleanse and dry the canal. Or the accumulation may be loosened by sweating, going into a moist atmosphere, by a blow upon the ear, or any violent jarring of the body, as in riding over a rough road.

The plug, when loosened, presently presents itself against the drum-head, when there is immediately developed a most unbearable tinnitus, accompanied by pain and sometimes vertigo. The patient is almost distracted by the confusion of sound resulting, and most likely for the first time experiences deafness. If the plug is of the dried variety its hardness may soon do great injury to the drum-head upon which it presses. In a certain proportion of these cases, where the plug is loosened, a well-marked impaction does not occur, but tinnitus, etc., will last for a short time, when there will be a period of rest experienced. Finally, however, the drum-head and meatus become so intolerent of the irritation, that the distress can be no longer borne.

The sudden displacement of the plug is frequently accompanied by a loud report, described by the patient as resembling the discharge of a pistol, etc. This sensation is probably owing to the concussion from the sudden entrance of air forcing the drumhead *inward*—the space between the plug and membrane having previously been occupied by rarified air—or by the impact of the plug upon the membrane. Or, in the event of the accumulation having formed *upon* the drum-head, its sudden separation would be accompanied by a "crack."

The presence of the accumulation often inflames the integument and periosteum to such a degree that the movements of the lower jaw are much limited from the pain experienced in the glenoid fossa. Such a condition is sometimes the first intimation we have of the existence of accumulations. Inflammations of the middle ear, from colds, etc., may arise during the presence of plugs, and they may thus be brought to notice.

An unpleasant sensation in the ear has induced patients to seek relief by pouring some medicament into the meatus, such as olive oil, spirits of camphor, chloroform, laudanum, gin and other liquors, and when an accumulation has been present these efforts at relief have caused impaction to take place.

I have seldom observed impaction in children, and they do not often complain of tinnitus. Accumulations are therefore not apt to be observed unless the patient is examined for some inflammatory condition attended with earache or deafness.

The latter symptom—deafness—is usually disregarded both by parents and teachers until it becomes very marked.

Here let me say that it should be an invariable rule to examine the ears of children who have recently had scarlet fever, measles, diphtheria, whooping cough, or severe colds.

Accumulations are most frequently bilateral, and in every instance, both ears should be examined.

Deafness is not usually present in these cases, although the accumulations completely close the canal.

Sound, in these instances, is conducted through the solid plug as well, or better, than through the air whose place it has usurped. I have observed cases of this kind where there seemed to be a hyperæsthesia of the auditory nerve. One case is worthy of mention here: A brakeman employed upon a railway freight-train had both ears *completely* closed by hard accumulations. Examination by voice and watch resulted in demonstrating *better* hearing than usual. He informed me that he could hear the engine's signals, when he was at the rear of a long train of cars, better than any person in the same position. The removal of the accumulations was not followed by any improvement in hearing.

I am in doubt as to whether the collection touches the drum-head in these cases or not; we have the statement of Toynbee, however, that the collection, when removed, sometimes has a cast of the membrane upon it.

We are quite sure, however, that when impaction takes place, the normal vibrations of the membrane are interfered with, and that the pronounced tinnitus is sufficient to occasion deafness.

Treatment.—All the collections alluded to should be removed as soon as possible. The surgeon should be provided with suitable instruments for this purpose, as the want of them may render all efforts unavailing, and the patient may be left in a worse condition than he was before.

I believe that in the greater number of cases the general practitioner will find the syringe the best instrument for his purpose, using forceps and curette with caution, when the syringe is not sufficient. The best syringe I know of, is made of brass, which can be plated with nickel, holding sixty cubic centimetres of water. It is fitted with rings for holding in one hand, although both hands are to be used in charging it. The nozzle is made of vulcanite six centimetres in length, with a calibre at its outlet of two millimetres. It is attached to the barrel by means of a bayonet fastening. The syringe, when filled, is held in the right hand, while the operator pulls the auricle upward, backward, and outward with the left hand, thus freely exposing the opening of the meatus. The water etc., escaping, is caught in a cup held by the adult patient himself, while sitting in a chair.

In no instance is it permissible for the operator to proceed until he has made a careful examination of the well illuminated ear.

The water used is to be as warm as can be borne by the patient. If the accumulation is very hard, and completely fills the meatus, the stream of water should be directed with decided force against one edge of the plug, preferably the upper side. Usually a few syringefuls are sufficient to dislodge the mass and somewhat soften it—sometimes bringing it away. If it remains in the canal it can be seized with Politzer's dressing forceps and removed. Should a continuance of the syringing be determined necessary frequent inspection should be made with a speculum as the operation proceeds.

The soft or scaly collections require more gentle syringing.

The pasty mass described by Blake is removed with difficulty. A strong solution of potash is to be carried into its substance from time to time and as it is softened, portions are to be seized by forceps and removed. A syringeful of hot water, thrown in occasionally, is of some assistance in bringing away detritus. It is best to remove the entire mass at one sitting, proceeding with great caution when near the drumhead. Its tenacity is such as to try the patience of the most skilful.

After any syringing there will usually be seen lying upon the meatus walls small particles of loosened epidermis. They must be cautiously picked out with forceps under illumination, using care not to forcibly detach any of them.

In any case where portions of cerumen or epidermis are not detached with slight force, it is best to leave them, perhaps carrying down to their place of attachment a little glycerine or olive oil to facilitate their removal when next an attempt is made. But with the best of care there will at times be left denudations.

Sometimes these denudations are extensive, leaving bleeding patches upon the walls of the meatus, and we may have in such cases subsequent diffuse or furuncular inflammation in the meatus.

I have in some instances found the collection of cerumen only a few millimetres in thickness, and have easily removed it with the dressing forceps, although the canal seemed obstructed by a dense black mass. With Dr. Buck's wire curette, a safe exploration can be made if the operator has suitable facilities for illumination, and proceeds with care, and the accumulation in many instances will be more safely removed with this instrument than by syringing.

The membrane, after the operation of syringing, has a macerated and injected appearance which, however, rapidly disappears.

After we are through syringing, the meatus is to be dried by passing in a small portion of absorbent cotton wool wound upon the end of a vulcanite carrier or held in the grasp of the dressing forceps. A firm pledget of wool should be left in the meatus until the patient is next seen. Where co-existent chronic catarrh, or other diseases of the middle ear, has induced deafness, the removal of accumulations will not, of course, restore hearing.

Coughing and dizziness are phenomena of common occurrence while syringing proceeds, but they quickly pass away, and are not alarming symptoms.

A return of accumulations is of frequent occurrence, depending, of course, upon the cause.

A considerable accumulation of soft cerumen often takes place in a few weeks.

In twelve or eighteen months a considerable plug may confidently be anticipated in many individuals.

As regards the treatment in detail, of the causes of these accumulations, it will be more appropriate to consider it in another connection, inasmuch as these causes are mostly the same as also induce affections of that more important part of the ear, namely: the conducting apparatus.

CONCLUSIONS.

Accumulations in the external auditory canal are of very frequent occurrence.

They are found in all ages, from one year and a half to the latest period of existence.

They are caused by any condition of the system which increases the heart's action and produces subsequent hyperæmia of the ear.

Increased cerebral circulation, induced by mental action or the use of alcoholic beverages, is a cause.

Affections of the mouth and pharynx, including dentition and the decay of teeth, likewise produce hyperæmia of the ear through sympathetic nerve connection. Inflammatory diseases of the middle ear and external meatus are also frequent causes. In the majority of the instances mentioned the accumulation takes place from the heightened nutrition of the parts concerned—increased secretion being the principal result.

These collections do not produce deafness, unless impacted, as sound is seemingly conducted through the solid plug in most instances as well as through the air which normally occupies the canal.

Frequent inspection should be made of the ears of children, as, after the exanthemata, colds, etc., they are extremely liable to accumulations. During the first and second dentitions children are especially liable to sympathetic hyperæmia of the ears, and indeed earache thus induced may easily be mistaken for the pain of dentition.

All accumulations should be removed without delay.

Syringing with a suitable instrument is found to be the best means for the removal of these accumulations generally, but in cautious hands the curette and forceps will be found of great service.

When attempts at removal are made without suitable instruments and good illumination the patient is likely to suffer greatly before relief is secured.

It is important not to regard these collections as of local interest only, but the remote causes should be sought for and treatment directed to them.

In this way we may hope in many instances to prevent a return of accumulations, and thus ward off one of the serious causes of injury to the more important structures known as the conducting apparatus.

CLASS-ROOM LESSONS ON SYPHILIS,

GIVEN AT THE COLLEGE OF PHYSICIANS AND SURGEONS IN THE CITY OF NEW YORK.

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[For The Medical Record.]

II.

TRANSFERENCE OF SYPHILIS BY CONTAGION.

Gentlemen:—I will next direct your attention to the *transference of syphilis by contagion.*

Recent investigations in regard to the disease germs of contagious diseases, warrant the assumption of Dr. Lionel Beale ("Disease Germs, their Nature and Origin," London, 1872, page 143, 21 seq.) that they are degraded cells (bioplasts), originally derived from the healthy elements of the human organism. Having lost, by degradation, the capacity for development into useful tissue, they still retain the power of amœboid

movement, proliferation, and vital sustenance. This view affords a starting-point for the rational explanation of syphilitic disease, which, so far as known, is confined to the human *germinal* elements. It is distinctly appreciable only in the lymphatic organs and channels, and in lesions which can be directly traced to disturbances of structure or function in the lymphatic system.

In complete accord with all that is known in regard to syphilis, we may assume, that contact of normal germinal cells (white blood-corpuscles), with those which have been degraded through the syphilitic influence, brings about a similar degradation in them; and these again, in the same way, acquire the power to degrade other normal germinal cells with which they may be brought into contact, whether in the same or in another person.

Thus the syphilitic influence, at the point of original inoculation, in varying intensity, is transferred from cell to cell, until its vitiating power is lost, by attenuation, or dilution, or until the entire organism is profoundly affected. Thus it is that we shall meet with syphilis, in varying degrees of severity: from that where the subject passes through it with scarcely a single characteristic manifestation, to one, who, in its various periods, will present a classical picture of every phase of the disease.

Germinal cells from one source or organism, cannot come in contact with those of an independent organism, without a breach of tissue.

Experiments by inoculation of syphilitic blood, and of the unmixed secretions of unirritated syphilitic lesions, have demonstrated the complete absence of any erosive property in the so-called *virus* of syphilis. In the wounds of such inoculations, healing was as rapid, and perfect, as in similar wounds where no inoculation had been made. All the secretions of syphilitic lesions, and of the blood, during the active stage of syphilis (usually from one to two years), contain degraded germinal cells or disease germs, and are thus capable of communicating syphilis.

The modes of transference of syphilis, from the diseased to the healthy, are three:—

1st. By DIRECT CONTACT of the diseased surface with an abrasion, or other breach of tissue, on a healthy person.

2d. By MEDIATE CONTAGION.

3d. By HEREDITARY TRANSMISSION.

Communication of syphilis by DIRECT CONTACT (as under the circumstances peculiar to the venereal act), is the most frequent mode of the acquirement of syphilis. In the female, initial lesions, from this source, are most common in the vicinity of the *ostium vaginæ;* especially so in the folds of mucous membrane about the *fourchette;* between the greater and lesser *labiæ;* under the sheath of the *clitoris;* upon, and even within, the *meatus urinarius.* They are also found to occur, not unfrequently, about the *anus.* They are rarely found on the *os uteri*, and still more rarely on the *vaginal rugæ.*

In the male, the most frequent sites are upon the *glans penis* and *prepuce;* occurring with especial frequency in the *sulci* by the side of the *frenum;* at the *meatus urinarius*, and in the *fossæ glandis*, and occasionally on the integument of the *penis.*

In both sexes the initial lesion is sometimes found upon either *lip*, in the angles of the *mouth*, or even within it, and also near, or within, the *anus;* all as a result of direct contagion. Communication of syphilis, by direct contact, through the act of *kissing*, is an accident of occasional occurrence. In this case, the inoculating secretion may be furnished, either by an *initial lesion*, or, by one of the common manifestations of active syphilis, known as the *mucous patch.*

Initial lesions are also found in various other localities, as solutions of continuity, *at any point*, may become the accidental recipients of the syphilitic *contagium.* Usually they are rare in proportion to their distance from the genitalia. Surgeons, accoucheurs, and gynecologists, are especially exposed to the peril of an innocent inoculation of syphilis, by direct contact. Within the circle of my city acquaintance, at the present time, are three medical gentlemen who acquired syphilis through an initial lesion on the right forefinger. In another case, a surgeon, also an acquaintance, received the syphilitic inoculation in the end of his right forefinger, through accidental puncture, by a spiculum of bone, while amputating the leg of a syphilitic subject.

INOCULATION OF SYPHILIS THROUGH MEDIATE CONTAGION.

Cells diseased by the syphilitic influence (or what is usually termed the syphilitic *virus*), may cling to substances with which they are brought into contact. All degraded animal cells, or disease germs, have the power of maintaining their vitality, for some time after removal from the organism in which they have been developed (Beale). Any material, therefore, which has been in contact with the secretions of syphilitic lesions, or the blood of a syphilitic, during the active stage of syphilis, may prove the medium of communication of syphilis to a healthy person, provided only, that the substance so contaminated, is brought into contact with a *lesion*, however slight, of the skin or mucous membrane.

The most common source of the *contagium*, in cases of MEDIATE CONTAGION, is the *mucous patch*, a constitutional syphilitic lesion, frequent upon the mucous membrane of the lips, mouth, and faucial region, in persons passing through the active stages of syphilis. The *saliva* is thus impregnated with the syphilitic disease germs, and, through it, a variety of domestic utensils, have been the known media of syphilitic inoculation, by contact with abrasions upon the lips of healthy persons, without regard to age or sex. In the same way, pipes passed from syphilitic mouths, cigars from syphilitic cigar-makers; canes, pencils, and even sticks of candy, contaminated by syphilitic saliva, have effected a syphilitic inoculation. Within the last eighteen months, I have met with four cases, where there was undoubted proof of the acquirement of syphilis through mediate contagion. One, of a young lady, with the initial lesion on the lower lip, acquired from her lover's kiss. The second, a physician, with the initial lesion just within the angle (on the right side) of the mouth, from a syphilitic friend's pipe. The third, in the same locality, appearing characteristically, about three weeks after a morning spent in a dentist's chair. The fourth, a worthy merchant, with his initial lesion (well marked) on his lower lip, with mucous patches in his mouth, and an accompanying syphilitic iritis. In this latter case, the only clue to the mode of acquirement of syphilis, was the habit of passing among numerous clerks, and, occasionally, transferring a lead pencil from their desks to his mouth.

Well-marked constitutional syphilis, with complete absence of any genital lesion, was present in each case cited.

The foregoing typical cases, illustrative of the modes through which syphilis may be contracted by *mediate contagion* (with the exception of the last), were seen in consultation with physicians from neighboring

States. Such accidents, however, are of more likely occurrence in great cities, where moral restraint is least stringent, and opportunity for acquiring venereal diseases most favorable. It becomes necessary, therefore, in connection with cases of obscure disease, simulating syphilis, to make a searching scrutiny of all incidents, conditions, and exposures, which may, in the light of possible accidents, point to opportunity of syphilitic infection, through mediate contagion. The third case cited is of especial value, as conveying a lesson on the necessity of scrupulous care of instruments, used in operations about the mouth.

So simple a procedure as the depression of a patient's tongue with a spatula, in examinations of the mouth and throat, may easily become the means of carrying the syphilitic disease germ, to an abraded surface in a healthy person.

In all cases, therefore, where the same instruments are in use for different persons, after thorough cleansing, their passage *through the flame of an alcohol lamp* should be systematically practised after every operation. The same procedure is equally indicated in regard to instruments used upon other mucous membranes, as those lining the urethra, the bladder, the rectum, the eye. It is also essential, in all instruments used in cutting operations at any point. Not the least important among the modes of conveying syphilis, by mediate contagion, is that by *vaccination*. Numerous well authenticated cases of this disaster may be found recorded in any modern systematic work on syphilis. Inoculation of syphilis by vaccination may be effected either by an impure virus, or an unclean knife. Use of the bovine virus, by means of a clean instrument, relieves this beneficent operation from the stigma of being considered a possible means of communicating syphilis.

Reports of Hospitals.

EPILEPTIC AND PARALYTIC HOSPITAL, BLACKWELL'S ISLAND, N. Y.

A CASE OF ATHETOID SPASM.

SERVICE OF DR. ALLAN McLANE HAMILTON.

[Reported by DR. BENJ. J. BALDWIN, House Physician.]

THE striking resemblance, in the case I am to cite, to that condition but latterly known, and described by Hammond, Clay, Shaw, Gowers and others as athetosis, convinces me that it is an instance of the same rare affection. Though differing, in some respects, from the few cases reported, the general characteristics will certify to their similarity. The case has been often seen by Dr. A. McLane Hamilton, the visiting physician, who has manifested deep interest in it, and, after repeatedly careful examinations, in which the differential points were fully considered, he expressed his opinion in favor of the affection being a disease *per se*, separate and distinct from other neuropathic maladies, for the reason that no history of primary paralytic affection could be ascertained, and that the disease existed in a *well-nourished* boy.

Joseph D., aged 13, admitted into the hospital in the latter part of the month of January. Is a well-nourished, finely developed boy, with a clear, bright intellect, and good memory. His father and mother are living, and enjoying good health. No history of epilepsy; no evidence of paralysis. Six years ago, the father states that the boy complained of pains in the toes which gradually moved up the leg, also of some headache and a feeling of numbness on that side. At the same time the use of the limb became impaired, and his gait awkward. Very shortly similar symptoms were developed in the hand and forearm on the same side. Soon these movements both of the hand and foot began, which have continued, uninterruptedly, for six years, increasing in violence very gradually. At present, the movements, to the peculiarity of which we would call especial attention, are very striking, and particularly suggestive of the symptoms of the disease under consideration. These motions are most markedly observed in the fingers, and I would describe them as complicated involuntary contractions and relaxations, which occur very slowly, and, seemingly, with marked deliberation, not being inflamed by emotional, or physical persuasion. The distinct features of these contractions are easily differentiated from those of chorea. Under concentrated efforts of the will he can control the hand for a few moments, but only when such efforts are made with strong determination.

I succeeded in completely quieting the hand, by the application of a cord drawn tightly around the wrist; but this method could, of course, not be tolerated long. The patient's plan of procuring relief was to grasp the wrist with the unaffected hand, but this, though quieting the fingers to a certain extent, was less effectual. Usually he sits with his hands in the position alluded to, and when walking would either, by the direction of the other hand, place the affected one in his pantaloon's pocket, or grasp it tightly behind his back. When, by whatever method employed, the movements are arrested, the fingers assume a position very characteristic, and very similar to former descriptions, viz.: the hand is slightly extended, the thumb and index finger are extended to the utmost, amounting to distortion; the middle finger is somewhat flexed, and the ring finger is strongly flexed and adducted, while the little finger is extremely abducted. During the contractions each finger seems to have a time for action, thus, the movements, beginning in the index finger, are imparted successively to its neighbor. The muscles of the arm share in these contractions, but those of the neck and face are unaffected. The foot, though involved to a less degree, "takes on," when the shoe is removed, movements similar to those of the hand. Groups of muscles along the leg sometimes participate. The same actions, both of the hand and foot, *continue during sleep*, while inability to rest is occasionally complained of from pains situated along the affected muscles. Dull headaches, slightly diminished sensibility of the affected parts, with some tremor of tongue, which, however, does not interfere with articulation, are other symptoms. As in all cases I have seen reported, so in this, the *right* is the affected side. Guided by the interest it has awakened, the medical armamentarium, in this case, has been as vast as it has proved ineffectual. All plans and suggestions of treatment, I must admit, have been baffled by the great obstinacy of the disease. I shall not mention all the measures employed, but will cite those which the result of observation has proven the most effectual. Among these the application of the galvanic current along the spine, and to the affected limbs, deserves the most prominent mention; for, after such applications which were given once a day, as strong as could be well borne, the patient has remarked that he felt somewhat relieved, and the contractions for a while seemed less violent. In conjunction with this, one-third of a grain of the extract of physostigma was given three times a day. Whilst

anticipating some permanent relief from this plan of treatment, we were, at last, forced to abandon it, only to adopt something less effectual. Among other remedies were employed: chloral hydrate, bromide and iodide of potassium, strychnia, phosphorus, zinc, etc., from which but little relief was derived.

In conclusion, allow me to recapitulate the important differences which make the case unique. Its interest is founded mainly on the fact that it is the first case reported in a child, all the others having occurred in adults over thirty years of age. When we compare the mental condition of this to that of other cases, we ascertain a point of no less interest; for the intellectual faculties in the former are unusually developed, considering the patient's opportunities, whereas, in the other cases of athetosis, there has been great deterioration of the mind, or the subjects have been either imbeciles or idiots. Again, when we consider the previous condition of the cases above referred to, another distinct feature is established. In all those cases there pre-existed either epilepsy, chorea, or paralysis, while in this there is no evidence of any complication or previous disease.

April 13, 1878.

Progress of Medical Science.

FOUR CASES OF SPINAL PARALYSIS OF ADULTS.—Dr. Salomon, of Hamburg, does not believe that spinal paralysis is as rare among adults as has been supposed. He has himself, within two years, met with four cases of the affection, and believes that many of the cases recorded in the literature of spinal diseases as "chronic myelitis," or under some even less precise terms, really belong in this category. Three of the four cases observed by himself developed acutely. They were characterized by more or less complete paralysis of motion, with moderate atrophy, but without pain or other disturbances of sensation. There was, moreover, no impairment of the functions of the bladder or rectum; no fever; no disturbance of the general health; no change in the reflex irritability. The state of the electro-contractility of the muscles was, however, very striking; the reaction of the muscles to direct irritation, or to irritation of the nerves supplying them, by the faradic current, was in general considerably diminished, while the reaction to the galvanic current was normal or even increased. In one of the cases, that of a young soldier, the affection came on after a night of sentinel-duty in the depth of winter, when the ground was deeply covered with snow; in another, that of a young lady, it appeared after a night of dancing at a ball. Two of the patients had suffered from sciatica of the affected leg one and a half years before the paralytic affection set in. In the case of the soldier, both legs were affected; in the two other cases the arm and leg of one side. All three cases recovered completely after the lapse of a few months. The treatment consisted of galvanism, supplemented in one of the cases by sea-air and sea-baths, and in another by iodide of potassium and a course of baths at Rehme.

The fourth case differed in some important particulars from the other three. It was not acute, but, on the contrary, developed so slowly, that the diagnosis was for a time doubtful. It commenced with a weakness in the left ankle, which slowly but progressively increased, and after the lapse of three months a slight dragging of the leg in walking was noticeable. The atrophy affected the entire leg, but was most marked in the adductors of the thigh; the loss of power affected these adductors and the peronei to a more marked degree than the other muscles. There seemed to be a certain amount of cutaneous hyperæsthesia on both sides. In all other respects the case resembled the foregoing. After eight weeks of treatment the atrophy had slightly diminished, and the faradic reaction of the muscles had improved considerably, the galvanic reaction remaining unaltered; subjectively the patient noticed an improvement in the strength of the limb. About this time he was awakened over night by a peculiar, painful sensation in the left arm, and in the morning found that he could no longer move the arm as well as usual. This weakness progressively increased, and was soon attended by atrophy and the usual electrical symptoms. At the same time the leg-symptoms ceased to improve, remained stationary for a time, and then became gradually worse. A peculiar and rare phenomenon, which has only been mentioned by Benedikt, was noticed soon afterwards in the muscles of the calf and the outer side of the leg-muscles in which the diminution of the faradic reaction was very marked. These muscles contracted energetically when a strong induced current was passed through them, but, although the current was kept up at the same strength, a sudden and apparently complete relaxation soon set in; on breaking the current, however, a further relaxation took place, which proved that a slight remnant of contraction had still persisted. Benedikt only met with this phenomenon in connection with tumors of the brain and other cerebral affections, but the author has also met with it in connection with nervous diseases of unquestionably peripheral origin. In the case under consideration the condition gradually became worse; the atrophy and paralysis of the left side increased and finally disturbances of speech set in, symptoms which indicate an advance of the morbid process upwards, and make the prognosis unfavorable.

Dr. Salomon believes that the similarity of the symptoms in the above and other recorded cases, with those of the spinal paralysis of children, makes it necessary to admit the existence of the same anatomical substratum for the two forms of spinal disease. It is an admitted fact that the lesions are to be sought in the anterior horns of the gray matter, but the autopsies of children have proven that they may vary greatly in nature, since sometimes the signs of atrophy, and sometimes those of inflammation predominate. He claims that similar differences may also exist in the case of adults. With respect to his own four cases, the entire absence of all inflammatory symptoms leads him to the conclusion that the primary process was one of atrophy.—*Berliner klin. Wochenschrift*, 1877, No. 39.

DR. ANGLADA, Professor of Internal Medicine in the *Faculté de Médecine* of Montpelier, died in April, last year, after a long and painful illness. He was 69 years of age. Over four hundred pupils accompanied the funeral cortege, and in compliance with an ancient custom, the last pupil who had received the degree of Doctor, marched in front of the coffin, clad in a black robe and bearing an open copy of the works of Hippocrates, which was veiled with crape. After the services in the church, the body was carried in procession to the *Faculté* and around the hall of the *Pas-Perdus*, a ceremony which is consecrated by ancient traditions.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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ABUSE OF MEDICAL CHARITIES AND THE STATE BOARD OF CHARITIES.

ANOTHER opportunity is offered for discussing the abuses of medical charities, by the report upon the subject by a committee of the State Board of Charities. It would appear that the medical profession is not alone interested in checking the growth of the evils connected with our dispensary system, but that distinguished laymen are taking the matter in hand, and working in the direction of reform with an earnestness of intention and sincerity of purpose that are worthy of the cause. So far, then, the discussion of the topic by the medical press has been productive of some practical results, and all those who have become disheartened as to ultimate success may now take courage and continue in their good work.

But we shall probably be getting ahead of our story by not introducing at this place, and somewhat in detail, the special subject of our remarks. It will be necessary to state, in the way of a history of the movement of which the present report * is the expression, that the Commissioners of the State Board of Charities of New York, as a result of discussion upon the abuses of medical charities before a recent meeting of the American Social Science Association, appointed a committee of five to look into the matter. In the prosecution of its labors this committee thought it advisable to secure in its favor the co operation of the representatives of the leading medical charities of the city, and ask for the free expression of individual views in connection with direct answers to certain leading questions.

It will, perhaps, the better serve our present purpose of presenting the subject in its entirety, to summarize these questions and their answers in their order. The first had reference to the desirability of general dispensaries confining their operations strictly to their respective geographical limits. The answers were all in the affirmative, as might have been anticipated.

The second question was to the following effect: "Is it, in your opinion, expedient, with a view to restrict the benefits of your institution to the really necessitous poor, that inquiries should be made of each applicant as to his or her pecuniary ability and special circumstances at the time aid is asked for?" There was a general concurrence of opinion that complete information should be obtained from each applicant concerning the point at issue.

In regard to the question as to "what should be the minimum income of the applicants as modified by the number in family, and other special circumstances," to deprive them of the benefits of medical charity, the answers were not by any means committal. The different experiences of the dispensaries depended so much upon the particular classes that called for assistance, that no rule could be laid down. There was, in the main, such a wide latitude for discretionary power, that, with the exception of the New York and Eastern Dispensaries, no direct answers were offered. The former dispensary believed that a good test for the income would be the amount of rent paid, and that when the latter exceeded ten dollars per month for one person, dispensary assistance ought to be refused. The Eastern Dispensary limited assistance to those below the following estimates: "Man and wife, $400 yearly, increased for each child of twelve years $100, with discretionary power to house physician."

The employment of a registrar for each dispensary, whose duty it should be to record and examine applications, was not considered necessary, it being unanimously voted that such duties belonged either to the house physician or examining physician.

The next questions, although divided in two, can be comprised in one, and they were practically so answered. We may state the question in effect as follows: "What course could be recommended towards those denied aid, not open to abuse, by which the names and addresses of good druggists and of doctors residing near such applicants, and willing to treat such cases for a small fee, may be communicated to them?" The answers were so far from being encouraging that they left "no alternative between refusing aid altogether, on the ground of the applicant's ability to pay, or admitting to the full benefits of the institution." Although on general principles this may be an orthodox method of disposing of the question, still we can conceive that house physicians, as individuals, are perfectly competent to use wide discretionary powers. There is really no objection to their giving the names of good medical men in the neighborhood of the patient, who are willing to take small fees. This privilege need not be abused, and

* First report of the Committee of the State Board of Charities on the abuses of medical charities, comprising the answers received from the general dispensaries of New York. Joseph W. Patterson, C. R. Agnew, Henry E. Pellew, Edward Oothout, and John Sherwood, Committee.

will not be abused by honorable men. If a patient applying to a dispensary is able to pay for advice and treatment, he should be directed to some worthy young struggler, and not be allowed to drift into the hands of some quack or counter-prescriber, as would otherwise probably be the case. This money for advice and treatment legitimately belongs to the profession, and should be directed in the proper channel.

Passing over the desirability of reporting the unsanitary condition of houses visited, which receives a hearty endorsement from all the dispensaries, we approach the last question, which is perhaps the most important of all, and which refers to the power and desirability of making a charge to applicants for relief. The New York Dispensary, on the reasonable plea that the charity, as such, is for the "very poor" only, have for the past two years adopted the plan of charging ten cents for each prescription in syphilitic cases, and lately this practice has extended itself to all patients treated. This latter plan, inaugurated three years ago by the North-Eastern Dispensary, and found to work so successfully, has now extended itself to all the other institutions save one.

To sum up, the committee think it well to make the following recommendations:

1. That no necessity exists for more general dispensaries in districts already occupied.

2. That a close attention to the rule of geographical limits is most necessary.

3. That only necessitous poor should receive treatment in the dispensaries, and that those who can pay something would benefit themselves as well as the institution by being required to pay a small sum, on the basis either of attendance or of medicine.

4. That, in general, the means of applicants can more easily be determined by the amount of rent or board paid than by any other method; but that care should be taken to exclude no one from the benefits of the institution through inability to pay.

5. That it is desirable to establish a uniform definition as to the value of the word dispensary patient.

6. That it is desirable that the several dispensaries should, so far as is practicable, act in harmony in respect to the subjects here discussed, and that by occasional conferences, for which provision has been made originally by most of the dispensaries, many of the minor abuses to which medical charities are peculiarly exposed would be most conveniently remedied.

Reviewing the report in a general way, although with the exception of establishing an entrance fee for such patients as can pay a small sum, no important step has been taken. Substantial progress has been made, however, in the direction of a better understanding among the different leading dispensaries in the city. There is evidently a disposition to act in harmony in respect to the subjects discussed, and a promise that many of the abuses referable to any lax management of the institutions will be duly corrected. The committee, around which all the good influences of concerted action must centre, has certainly made a good beginning, and through its reporter, Mr. John Sherwood, deserves the thanks and encouragement of the profession.

Reviews and Notices of Books.

EXPERIMENTAL AND CLINICAL STUDIES ON CEREBRAL TRAUMATISMS. By H. DURET. Bureau of the Progrès Médical, Paris, pp. 369, 8vo.

THE first chapter of this work is devoted to the consideration of cerebro-spinal shock, and may be briefly summed up as follows: when a blow is struck upon the head, a wave of cerebro-spinal fluid is formed around the hemispheres and in the ventricles, distributing the violence received at one point to all parts of the central nervous system, and more especially to the medulla. The force of this wave is exercised most markedly in the arachnoid sacs at the base of the brain around the medulla, and especially on the floor of the fourth ventricle and upon the restiform bodies.

At the moment of injury, an excess of tension is suddenly produced around the blood-vessels in the lymphatic sheaths; hence results a temporary anæmia of the nervous centres in their totality. This anæmia is augmented by reflex vascular spasm caused by irritation of the restiform bodies and of all the sensory parts of the mesencephale. To this contraction succeeds an equally diffused vascular paralysis; the latter condition sometimes lasts to the stage of inflammatory reaction.

In the succeeding chapter, the author enters into an elaborate discussion of the mechanism of cerebral compression. As a result of his researches he formulates the following doctrine: Every foreign body introduced into the cranial cavity acts not alone on the subjacent parts (local action) but, if the diminution in cranial capacity is sufficient, or, in other words, if the pressure increases to a certain extent (8–15 cms. of mercury), it has also a general effect upon the cerebral centres. These general effects are caused, as in shock from injury, by a distribution of the excess of tension to all parts of the brain, producing contraction of the blood-vessels.

The third chapter is an interesting treatise on the Rôle of the Dura Mater in Cerebral Injuries. Duret states that the sensory nerves of the dura mater are eminently excitable. Irritation of these nerves is responded to, 1st, by pain, hyperæsthesia, neuralgia, and reflecto-motor phenomena; 2d, by reflex spasm in the muscles of organic life.

In Chapters IV. and V. the author treats of the parts played by the meningeal vessels and by the different parts of the encephalon in cerebral injuries. They are, in great part, a résumé of what is already known on these subjects.

This work is notable for its originality and for the careful and painstaking manner in which the author has carried on his numerous experiments on this subject.

Duret's admirable researches on the circulation of the brain and on cerebral localization have eminently fitted him for the work in hand. The book will amply repay careful study, both by the pathologist and by the student of nervous diseases.

DISEASES OF THE NASAL CAVITY AND THE VAULT OF THE PHARYNX. Translated from the German of Dr. CARL MICHEL, of Cologne, on the Rhine. Specialist in Laryngo- and Rhinoscopic Surgery, with an Introduction by E. L. SHURLEY, M.D., and C. C. JEMANS, M.D., of Detroit, Michigan. First American edition. Detroit, Michigan: C. Jung, 1877. Pp. 109.

THE author of this work declares in his preface that he has made "a number of new discoveries, regarding the knowledge and treatment of diseases in the nasal cavity and pharyngeal vault," and, with laudable zeal, desires to make these known to the medical profession. After mentioning in his introduction, in a most cursory and somewhat slighting way, the names of Voltolini, Schroetter, and Zaufal, he modestly assumes that no one has ever described the nasal diseases so thoroughly as he has endeavored to do in this book; "nor has there ever before been such observation on living subjects, and such results reached thereby, as I have described in the chapters on Chronic Catarrh, Ozæna, Syphilis in the Nasal Cavity." Of course, after reading an assertion so positive, one is for a moment bewildered, but afterwards can but recall the names of Follin and Duplay, who have devoted in their "Traité de pathologie externe," Paris, 1870, just 142 pages to these affections; of Spencer Watson, whose treatise on "Diseases of the Nose," London, 1875, numbers 472 pages; of Cohen, "Diseases of the Throat," New York, 1872, where we find 81 pages on this subject. It is really too bad that an author, whose merit is so well accentuated in his own eyes, should be willing to ignore absolutely other good and zealous workers in the same field. In the treatment of chronic catarrh our author, after affirming that "in most cases the mucuous membrane of the nasal cavity is only diseased in spots"—which bye the bye, is not correct—proceeds to laud the use of the galvano-cautery, and states that since he has become familiar with it he has "found it a remedy by which every chronic catarrh can be surely and entirely cured in a few operations" (p. 26).

Surely, then, American practitioners have no need to search further, as the true and sole remedy for a most obstinate affection is now made known to them. The treatment of ozæna by means of "Englische Spritze," is eulogized fully, and the author claims that he has "merited a feeling of gratitude from many a patient by *my* method of controlling a disease."

No mention is anywhere made in this chapter of Rougé of Lausanne, whose operation for the cure of ozæna certainly deserves a better fate. In chapter V. we find "Syphilis in the Nasal Cavity" treated in six pages, and six histories recorded. These pages and these histories contain nothing new, and iodide of potash internally, and cauterizations with nitrate of silver, are the remedies employed.

To be just, there are many points in this work, especially in regard to the use of the galvano-cautery, which deserve to be remembered, but throughout its pages there breathes such intense egotism, and there is so great *apparent* ignorance of other men's doings (English, French, and American), that we lay it aside with more of pleasure than regret.

HANDBOOK OF OPHTHALMOLOGY. By Prof. C. SCHWEIGGER, of the Univerity of Berlin. Translated from the third German edition by PORTER FARLEY, M.D., Rochester, N. Y. Philadelphia: J. B. Lippincott & Co. 1878.

In spite of the many text-books on ophthalmology, of which a goodly number are in the English language, we have here still another in the translation of the third edition of Professor Schweigger's manual. The work in the original German has proved an acceptable one from the appearance of the first edition, and this translation will undoubtedly be a very useful book to the large number of practitioners who cannot read German. The work is divided into three parts, and makes a handsome volume of 550 pages.

Part First treats of the anomalies of refraction and accommodation, monocular diplopia and polyopia, spectacles, the ophthalmoscope and ophthalmoscopic optometry, and diseases of the ocular muscles, including squint. It occupies about one-third of the book, and is in general a very practical and satisfactory discussion of the subject. That part which relates to the size of the ophthalmoscopic image is clear and sufficiently full; but the subject of the ophthalmoscope is discussed in a very meagre and incomplete manner. The author makes no mention of Loring's ophthalmoscope, which in itself is a very marked omission. His citation of authorities is very incomplete all through the book, and his failure to make even a single mention of work in the department of ophthalmology done on this side of the Atlantic displays either singular ignorance or something still more to be deprecated. His consideration of the subject of muscular asthenopia and dynamic strabismus is exceedingly good, but in speaking of the advancement or bringing forward the insertion of an ocular muscle, he makes no mention of Agnew's operation. This is the more marked because in describing a method which, he says, "combines all the good points of the various operations," he speaks of the insertion of the sutures in the muscle before detaching it from the sclera, as "greatly facilitating the operation," a step which is especially enforced in Agnew's method.

Part Second treats of diseases of the orbit, lachrymal apparatus, eyelids, conjunctiva, cornea, sclera, iris, lens, and vitreous body. In discussing orbital tumors, the author is inclined to value too highly the removal of the periosteum of the orbit in cases of adherent malignant growth. In our experience this has not proved of much success in preventing the return of the growth, and is moreover a serious operation.

Professor Schweigger considers acute inflammation of the lachrymal gland as not very uncommon, but on this point we differ with him. He recommends that great care be exercised in probing the nasal duct, which we regard as most excellent advice.

In the treatment of chalazion of the lids, he recommends eversion of the lid, and splitting the tumor upon the conjunctival surface in a direction perpendicular to the edge of the lid, which may leave an irritating scar. A better plan is to split the lid vertically, but at the same time parallel to its cartilage, entering the knife in the ciliary margin just in front of the cartilage. The contents of the chalazion can be evacuated with ease, and though the operation is painful, it leaves no irritating scar.

The author, in speaking of pterygium, says that its development very seldom interferes with vision, by advancing far enough upon the cornea to obstruct the area of the pupil. This, however, we regard as a mistake, and consider such an accident as by no means uncommon.

In the chapter on irido-choroiditis, we think that the statement, "Increased hardness indicates optic-nerve excavation," is somewhat dogmatic, and hence should be accepted with some reservation.

Part Third treats of diseases of the choroid, retina, and optic nerve, glaucoma, and amblyopia, with a separate chapter upon the ophthalmoscopic picture of the normal fundus or background of the eye.

There are but few illustrations in the work, and the absence of any detailed anatomy of the eye and its appendages must be regarded as a blemish, if the work is to be considered a complete treatise.

The work of the translator has been well done. There is an occasional awkwardness of expression, or the use of one word in place of another, which custom may have rendered technical. Thus, "circles of diffusion" is used where "circles of dispersion" would be better. Again, on page 204, "more seldom" should be "more rare," and on page 386 and elsewhere, "punctate" is better than "punctated." On page 426, "spindle-shaped form" is tautological. Finally, there is a good index.

The publishers' work, with the exception of one or two illustrations, has been well done, and the book may be recommended as of value to the student and general practitioner.

INJURIES OF THE EYE AND THEIR MEDICO-LEGAL ASPECT. By FERDINAND VON ARLT, M.D., Professor of Ophthalmology in the University of Vienna. Translated, with the permission of the author, by Charles S. Turnbull, M.D. Philadelphia: Claxton, Remsen & Haffelfinger. 1878.

THIS little book of not quite two hundred pages, from the pen of the well-known Viennese professor, was first published as a series of articles in the *Wiener medicinische Wochenschrift*, and these papers were subsequently collected and published unchanged in book form, of which latter the volume before us is a translation. The author, as a member of the medico-legal commission of the university, had often remarked that when physicians were called upon to testify in cases of injuries of the eye, they could not answer as experts, owing to their comparative ignorance of the specialty in question. Hence, the object of this work is to impart a knowledge of what is essential to the medico-legal expert in cases of injury to the eye.

He divides the subject into three groups:

I. Injuries produced by sudden compression or concussion of the eye.

II. Injuries produced by the entrance of a foreign body not acting chemically.

III. Scalds and corrosions of the eyeball.

In addition, a *fourth* chapter is devoted to a consideration of such affections as are either feigned or produced artificially and intentionally.

The reputation of the celebrated author is so widely spread, and his authority, particularly upon this subject, is so high, that a criticism of the subject-matter of this little volume would be a work of supererogation. We can simply agree with the author in his views of the object of the book, and assert, on our own part, that it will form a most valuable basis on which to write a strictly technical and exhaustive monograph on the subject.

The work of translation has, on the whole, been fairly well done, but there are numerous awkward expressions and even faulty translations. The title-page is correct, but upon the outside of the back of the book, where we are accustomed to see the name of a work and the author's name, we read the announcement: "Injuries of the Eye. Turnbull." (!) This may certainly be classed as a sin of commission on the part of the translator, and is, to say the least, gross discourtesy to the distinguished author, who kindly gave him permission to translate the work. On page 32 the word "zonal" should be replaced by "zonular." On page 36 the expression, "resolution of the nidus of accumulation," is very awkward, and too literal a rendering of the German to be easily understood. On page 42 the term "eye-globe" is certainly not English; it should be "eye," or "eyeball," or "globe." On page 44 the expression, "beyond the lens-system," is too German to be English, and should be "posterior to the lens." On the next page, "commotion of the membrane" should be "concussion of the membrane." On page 51 the words "maculous . . . . spots" are tautological. On page 75 the word "reflectory" is not English. On page 79 the words, "refusal of the pupil against atropine," should read, "resistance of the pupil to the action of atropine." In several other places the preposition "against" is used in a wrong sense. On page 86 the word "circumvented" is used in a very awkward sense, and is unnecessary. On page 86 the word "remarkably" is used where "markedly" should be employed. On page 113 the expression "pupillary district" is used where "pupillary space" is the usual term employed. On the next page, "dislaceration" is not English, and farther down there is a most awkward, ungrammatical sentence, beginning as follows: "Even if such an eye should not, as it frequently does, be lost by inflammation ——" (!!) On page 122 another awkward expression is met with in "to endeavor an exhaustion of the lens," and on the next page the use of the Greek word "encheireses" would not be intelligible unless a person were acquainted with Greek, and in an English work must be regarded as inadmissible.

There are numerous other awkward translations and a few typographical errors, but these will suffice to indicate the lack of care employed in revising the translation for the press.

The paper and type are both good, and this little volume, like all work that comes from the hands of the renowned author, is of value as the result of long experience, great diagnostic skill, and sound judgment.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 22, 1878.

DR. JOHN C. PETERS, PRESIDENT, IN THE CHAIR.

FROM CANCER TO SARCOMA.

DR. HEITZMANN presented a tumor of the breast that had been extirpated a few months before by Dr. Mundé. It weighed eight pounds and showed some deep ulcerations, the surfaces of which, however, were perfectly smooth. The diagnosis of sarcoma was made before the operation, and was confirmed by microscopical examination afterwards. On examining the nipple Dr. H. found a well-marked specimen of hard cancer. After a careful study of the case he was convinced that this was an instance of the transformation of cancer into sarcoma, or at least that the disease started as a cancer and terminated as a sarcoma. In answer to a question, he remarked that sarcoma could not be transformed into a cancer, for the reason that the latter was more highly organized than the former.

CHROMIDROSIS—TWO VARIETIES IN THE SAME SUBJECT.

DR. A. H. SMITH presented two specimens of chromidrosis, which were remarkable in that they were produced by the same body and yet different in color. The secretion from the left axilla yielded a dark brown

color, while that of the right axilla was of a bright orange color. The patient was a delicate lady, forty years of age, who had no definite disease, but was simply prostrated at the time, the result of a long journey from the West.

DR. HEITZMANN remarked that cases of chromidrosis were frequently presented at Hebra's clinic in Vienna, and he himself had seen quite a number, but he had never met with an instance in which different colors were produced by the same body.

TRICUSPID AND MITRAL REGURGITATION.

DR. BEVERLEY ROBINSON exhibited a heart taken from a man who died in his service at Charity Hospital, March 7th. The patient was a very corpulent individual, and presented all the phenomena of general anasarca. There was albumen in the urine, but no casts. He had taken cold a year before, and since that time had suffered from a dry cough, followed during the past three months by dyspnœa. On examination of the heart the area of dulness was increased, the apex-beat was an inch and a half to an inch and three-quarters below the nipple and to the left. On auscultation there were evidences of tricuspid regurgitation with a suspicion of mitral regurgitation.

The autopsy, made by Dr. Maxwell, proved the diagnosis to be correct, that is to say, the heart was enlarged (hypertrophous dilatation) with mitral insufficiency. The specimen was not specially interesting, except, perhaps, in connection with a discussion which had recently taken place before the Society in reference to the frequency of association of hypertrophy of the left ventricle with mitral regurgitation. As a matter of fact, here was slight mitral regurgitation with hypertrophy of left ventricle. Another point of interest was one upon which very little stress was laid by authors, and that was the liability of detecting murmurs when they are believed to exist. The case was one in point, where repeated examinations were made before the murmurs could be detected.

DR. A. H. SMITH was in the habit, when he suspected murmurs and was unable at first to find them, to make the patient exercise by walking across the floor.

DR. PETERS was sometimes compelled to make them walk up upstairs before the auscultatory signs were satisfactory.

DR. ROBINSON remarked that he had known of cases in which even these means had failed.

SARCOMATOUS TUMOR OF CALF OF LEG—SUBSEQUENT SARCOMA OF THE LUNG AND SPLEEN.

DR. STIMSON presented a specimen in order to complete the history of a case related at the meeting of February 27th. At that time a sarcomatous tumor of the calf of the left leg was presented, which was removed by amputation through the condyles of the knee joint, from a woman aged 37 years. In January, 1876, she had a tumor of similar character removed from the right gluteal region by Prof. A. C. Post. (*Vide* MEDICAL RECORD, vol. xiii., p. 254.) The stump healed kindly, but coincidently the chest-symptoms from which she had previously complained began to increase. The pain was more marked than the difficulty of breathing. On examination the right chest was dull on percussion and apparently partially filled with a new growth. In consequence of the increase of growth of the lung, the liver was pushed downward until its lower margin reached the right iliac fossa.

When the body was opened the diaphragm was convex downward and projected three fingers' breadth below the free margin of the ribs. The substance of the right lung was entirely replaced by the new growth. The spleen was occupied by a globular tumor of a yellowish gray color, smooth, of homogeneous appearance and sharply cut margins. There were no new growths in the liver.

The stump of thigh from the patient was also exhibited, the point of interest being the remains of the carbolized silk ligature, which was nothing but the knot effectually encysted by effused fibrine. The ligature had been applied three months before. There were two neuromata at the extremity of the stump, situated respectively upon the divided edges of the popliteal and sciatic nerves.

STRICTURE OF URETHRA—EXTERNAL URETHROTOMY—DEATH.

DR. BRIDDON presented the genitalia removed post-mortem from a man aged 58 years, whom he first saw three months ago in consultation with Dr. Murray. The patient had been confined to his bed the larger portion of fifteen years with rheumatic gout. His wrists were deformed by that disease, and under some portions of the integuments of the hand there were deposits of urates. He had also been the subject of stricture of the urethra for a period of thirty years; at all events, the difficulty in making water dated back to an attack of gonorrhœa which he had at that time. When Dr. B. saw him there were two strictures in the penile portion of the urethra, one three inches down and the other an inch beyond. Neither of these were tight strictures, one admitting a No. 5 and the other a No. 6 sound. There was, however, a tight stricture in the intrapubic portion, which would sometimes admit a No. 3 or No. 4 elastic instrument. On the right side of the stricture was a false passage, which very frequently thwarted the efforts at dilatation. He had atony of the bladder, there being twelve or fourteen ounces of residual urine after he had emptied it himself. The contents of the bladder, after removing the last portions, was composed of pus. The urine was albuminous, but no casts were found, on account of the large amount of pus present. There were also some chest-complications.

Regarding his condition an unfavorable one, Dr. B. advised dilatation, but after persistent efforts for two months nothing was accomplished. A month ago the patient entered the Presbyterian Hospital, and an examination at that time revealed the same condition of things. Catheterism of the bladder was resorted to daily for a week or more after his admission, and with benefit. The urine was always alkaline. At the expiration of ten days a false passage was entered, after which instrumental efforts were discontinued for a week. A consultation having been held at this time, external urethrotomy was advised, and also the division of the penile structure by Maisonneuve's instrument. An unfavorable result was apprehended, and a statement to that effect was made to the patient. He made up his mind, however, to have the operation performed last Wednesday. An attempt was made to enter the bladder by fine filiform whalebone guides. Seven or eight of these went into the pocket. When the pocket was full nothing more could be passed. Finally, the filiform guide of Maisonneuve passed the stricture, but the instrument itself could not be introduced farther than the membranous portion. The perineum was opened upon the director in the usual way, the urethra being slit up as far as the apex of the prostate. The stricture in the penile portion was easily divided along its floor by Maisonneuve's urethrotome. After the operation, the patient persistently vomited until his death. The vomiting was

evidently uræmic, and the means used to allay it were, as usual, useless.

The autopsy was made this afternoon (May 22d). The left lung was found moderately adherent to the chest parietes; the apex in the condition of fibroid degeneration. The right lung was bound down by firm and old adhesions, the apex being also in a condition of fibroid degeneration, besides containing one or two small cavities. The valves of the aorta presented two or three patches of atheroma, but it was otherwise healthy.

In the abdominal cavity there were found recent adhesions over the surface of the spleen, and entirely limited to that organ. The kidneys were in an advanced stage of granular degeneration. There were deposits of urates in some of the tubular structures. The cortex had almost entirely disappeared. There was no dilatation either of the pelvis or the ureters. The coats of the bladder were considerably thickened and corrugated, and the lining membrane was of a slaty color. In the neighborhood of the trigone, there was well-marked ulceration. The floor of the urethra was divided by the Maisonneuve from the meatus to the incision in the perineum, there being a continuous slitting of the mucous membrane from one point to the other. Immediately opposite the bulbous portion of the urethra was found an oblique septum of the mucous membrane, constituting a stricture, in front of which was a pocket about an inch in depth. Behind this stricture was a still deeper pocket, in which the instruments were arrested in attempts at catheterism. The form of the latter stricture was that of a diaphragm. There was also an ano-perineal fistula, through which urine passed at different times.

Dr. Heitzmann stated that the actual condition of the kidney in this case, that of catarrhal nephritis, and not the abundance of pus, as stated, explained the absence of casts in the urine.

INTRAPLEURAL SARCOMA—INTERESTING QUESTIONS OF DIAGNOSIS.

Dr. Polk presented a tumor of the pleura with the following history: It was removed from a gentleman who came to his office last November. Upon questioning him it was found that he had been an invalid for two or three months, and that he had had a cough for six months. He had been able to attend to his business until two months previously, when the difficulty of breathing and loss of strength compelled him to give up and to seek advice. Dr. P. questioned the patient closely in regard to the character of the dyspnœa, and received the answer that it occurred only after exertion. The sputum consisted only of the bronchial secretion. There had been no hæmoptysis. The temperature was normal. A physical examination was made of his chest, and the condition of things found was simply this: On inspection the whole of the left side of the chest was bulged out. This was more marked anteriorly than posteriorly. The appearances were those which ordinarily present themselves in cases of pleurisy with a large amount of effusion. There were bulging of the intercostal spaces and a lack of expansile movement. Palpation showed slight fremitus over the upper portion of the chest, over the sides somewhat diminished, and about normal posteriorly. On percussion there was absolute dulness on the entire left side, with the exception of a small triangular space posteriorly, and at the base of the lung, extending up to the lower angle of the scapula and around laterally to the opposite border of the interscapular space. So far as auscultatory signs were concerned, there was simply pure bronchial breathing of a most intense character, and vesicular respiration over the triangular resonant space. Dulness extended to the right of the sternum, from three-quarters of an inch to an inch from the first intercostal space clear into the hepatic region. The apex-beat of the heart was in the sixth intercostal space. No abnormal sounds could be heard.

The impression first made upon Dr. Polk was that the case was one of encysted pleuritic effusion, and a favorable prognosis was given. On thinking over the case afterwards, it struck him that such a large body of fluid as seemed to exist there would scarcely remain in the upper portion of the lung, that it would force aside the adhesions and destroy the evidence of normal lung-tissue below. This was the point which militated against the idea of simple fluid in the chest. The next point was the nature of the bronchial breathing. It was not the muffled bronchial breathing of compressed lung transmitted through a fluid. Another point: if the lung was attached to the diaphragm posteriorly, it was evidently compressed in that direction. Supposing the bronchial breathing was due to the compression, the loudest breathing should have been posteriorly, but, on the contrary, it was more intense in front.

Another point was that the patient had no elevation in temperature. He was also positive—and being a very intelligent man his impressions were trustworthy—that during his whole illness he never had fever nor increase of perspiration. These facts led Dr. Polk to the conclusion that he had to deal with an intrathoracic tumor. The question might, of course be settled by puncture, but the latter was not considered a prudent measure.

The patient was watched from day to day, but after a while the triangular space became dull and gave bronchial breathing. The entire left side of the chest then presented precisely the signs which are noted in ordinary cases of pleurisy with effusion.

Dr. Loomis saw the patient at this time. He questioned the gentleman and made a physical examination. The conclusion he arrived at bore out fully the opinion to which expression was just given, and was quite a natural one with the facts before him. The diagnosis was pleurisy with effusion. When he was informed of the previous existence of the resonant space posteriorly, he, however, changed his opinion to that of possible intrathoracic tumor.

The history of the case after this was summed up in a gradual sinking of the patient, and finally death on November 5th.

At the autopsy the entire left chest-cavity was filled with a lympho-sarcoma. The heart was found lying midway under the sternum. The tumor extended half an inch to the right of the right margin of the sternum. The left lung was compressed and carnified, and was not much larger or thicker than the extended hand. There were no evidences of tumor in any other portions of the body. Immediately around the compressed lung there was about half a pint of fluid.

A month before the patient died he was aspirated posteriorly an inch below the scapula on the left side, and a pint of bloody serum was obtained. On the withdrawal of the fluid there was a partial return of the respiratory sounds. The starting-point of the tumor seemed to be the pleura. The bronchial glands were in no way implicated.

Dr. Loomis described the physical signs which he obtained on examination. They were identical with those stated by Dr. Polk. Dr. L. stated that when he learned that the disease had commenced from above and had progressed downward, the idea of an

intrathoracic tumor very naturally suggested itself. Under the circumstance of a complete filling of the chest by a tumor he did not think it possible to diagnosticate such a condition of things from that of simple fluid in the same cavity. The absence of fever in subacute pleurisy was not impossible, and he took issue with Dr. P. on that point. It was true that fever was the rule, but this rule was by no means absolute.

DR. POLK did not see how it was possible not to discover a change in temperature if examinations were made continuously for five or six days together. He could very easily understand how occasional examinations with the thermometer should lead to negative results.

DR. LOOMIS had known of cases of subacute pleurisy in which the temperature had been normal for two weeks, and when examinations were regularly made during that time.

DR. POST remembered that the late Dr. Swett had given an account to the Medical and Surgical Society of a solid tumor filling the chest, and that Dr. Swett had stated at the time there were no means of distinguishing between solid and fluid contents. Whereupon, on that occasion, Dr. Post had expressed his belief that auscultatory percussion might be able to make such a distinction. Dr. Post asked if any observations had been carried out since that time with a view of determining the point.

DR. LOOMIS was of the opinion that auscultatory percussion was unable to make any distinction between solid or fluid chest-contents.

DR. ROBINSON asked if a distinction in these cases could not be made between solids and fluids in the chest by taking advantage of the fact that when fluid is present the lung being floated up gives a tympanitic resonance under the clavicle.

DR. POLK stated that such tympanitic resonance under the clavicle was not always present, and instanced a case in point which occurred while he was an interne in Bellevue, and in which there was absolute dulness under the clavicle.

DR. LOOMIS remarked that when the pleural cavity was completely distended the lung could not rise above it, but, on the contrary, the lung being held in place, the fluid rose above it and produced the dulness under the clavicle. It was a question how bronchial breathing, in connection with pleuritic effusion, could be explained. Dr. Stokes attempted to explain the phenomena by assuming that the lung, at the point where bronchial respiration was heard, was adherent to the chest-wall, and that the conduction of sound was more direct. In the next case which he examined, however, no such adhesion was found, and he abandoned his theory. In Dr. Polk's case the bronchial breathing was explained by the fact that the bronchial tubes were open.

DR. POLK stated that it seemed to him that there was some aid in diagnosis between sound transmitted through fluid simply, or through solidified lung and intrapleural growths. The difference was simply this: when there is bronchial breathing from compressed lung, the sound coming through the fluid has a muffled character; and when it comes through consolidated lung-tissue or through a tumor, you get an intensified bronchial sound very much like the blowing through a metallic tube. It seemed to him that the difference was sufficiently marked to make an element in the diagnosis.

DR. LOOMIS admitted that when either of these conditions were present by themselves a distinction might be made, but when they coexisted there would be trouble again.

DR. A. H. SMITH asked if there was not a difference in the bulging of the intercostal spaces in cases of fluid effusion compared with that which might occur from intrapleural growths. Reasoning *a priori*, he would suppose that the bulging would be more marked in cases of fluid effusion.

DR. POLK did not believe there was any difference between the two.

DR. LOOMIS corroborated the statement of Dr. P., and alluded, in connection with it, to the difficulty in diagnosticating by mere tension of the abdominal walls between some cases of encysted dropsy and abdominal tumors.

DR. POLK remarked that in his case the most intense bronchial breathing was in front in the infraclavicular region and mammary regions. Now, if it were fluid in that sac, the most intense bronchial breathing should have been in the interscapular region and around the scapulæ. The contrary, however, was the case.

DR. HEITZMANN referred to a case which he saw for Dr. Elsberg, during the sickness of the latter, about two years ago. There was dulness all over the anterior parts of the chest, and in regard to auscultatory signs the case was almost precisely similar to that related by Dr. Polk. There was, however, in addition thereto, a paralysis of the left vocal cord due to pressure upon the left inferior laryngeal nerve, and a decided weakness in the pulsation over the arteries of the left arm. The diagnosis of a tumor was accordingly made. He asked, in conclusion, if paralysis of the vocal cords was not a strong element in the diagnosis.

DR. LOOMIS remarked if he could find no other explanation for the paralysis in question, he would suspect a tumor.

CYLINDROMA OF ANUS AND RECTUM—REMOVAL BY VOLKMANN'S METHOD.

DR. KEYES presented the anus and three inches of the rectum, which he extirpated for cylindroma, with Dr. Van Buren in consultation. The patient was a female, aged 38 years, who had suffered from the disease for two years. Her mother, aged 70 years, has been a victim to the same character of growth, and in the same locality, for several years. The operation was done antiseptically and in accordance with the rules laid down by Volkmann. The patient being a poor girl in a tenement, and surrounded by many disadvantages, Dr. K. concluded to get rapid union by pressure from within. Having failed in accomplishing this by means of a sponge in the vagina in a previous case—owing to the accumulation of gas in the intestine behind, and the consequent tearing out of the stitches—he resorted to another and more effectual expedient. He employed an instrument devised by Guyon for the purpose of tamponing the bladder after lithotomy. It consisted of an india-rubber bag, which was inflatable with air and air-tight, and through which a stiff catheter passed. In a word, it was constructed after the plan of Trendelenburg's tracheal tampon. This instrument was introduced into the rectum and inflated. It answered the intended purpose admirably, exciting the requisite amount of pressure and at the same time allowing the escape of intestinal gas through the tube. The patient made a speedy recovery without a bad symptom. She was up on the twelfth day, and got perfect union all around between the mucous membrane and the integument.

EPITHELIOMA OF THE LIP.

DR. KEYES also exhibited the lower lip, the seat of epithelioma, removed from a man aged 80 years. The

disease had involved not only the entire thickness of the lip itself, but also the periosteum covering the chin, so that the bone of the latter was laid bare by the operation. Quadrilateral flaps were taken from below, according to Syme's method, but the difficulty presented itself of obtaining support for them. They were made much longer than was at first required, so as to enable them to curl upon themselves at their upper free margin. A button suture, horizontally applied, emerging centrally in each flap, was passed through the mucous membrane left upon the inner side of the alveolar process of the chin. It answered perfectly. Photographs were exhibited showing the condition of the patient before and after the operation. The result was very satisfactory.

REMOVAL OF NEEDLE FROM THE HAND.

Dr. Keyes lastly exhibited a fragment of a small sewing-needle which he had removed from the hand of a seamstress. The patient accidentally struck the palm of her hand upon a needle which was stuck upright in a table, the head and half of the shaft of the needle entering the flesh, while the remainder was shattered and lost. A careful examination of a speck which the girl said was the point of entrance, failed to discover anything even by the aid of a watch-glass. The patient being exceedingly importunate, the part was anæsthetized with ether spray, a triangular flap made, and a portion of the needle was easily grasped and extracted. She was informed that no more trouble would follow, as it was supposed that all of the needle was removed. Two weeks later, she came with a swelling upon the extensor tendon of the index finger over the centre of the metacarpal bone. This was opened and another portion of the needle extracted, apparently from a cyst which it had created for itself alongside of the tendinous sheath.

The Society then went into Executive Session.

Correspondence.

CUMULATIVE ACTION OF DIGITALIS.

To the Editor of The Medical Record.

Sir:—For a long time the cumulative action of digitalis has been believed to be one of the possible results of its administration, and, at the present time, most physicians are on the alert to observe any evidence of this accumulated influence in all cases in which the drug is employed. Recently, however, there have been those who have expressed unbelief in the possibility of the occurrence of this effect after the use of digitalis, while others pay very little heed to this part of the subject when treating of the administration of the drug.

While we may rightly believe that the cumulative action of digitalis is not frequently met with, I think that the following brief history will demonstrate that this sequence of its administration is liable to occur.

L. Y., aged six years—after an attack of scarlatina occurring in March, 1877—developed albuminuria. As a part of the treatment of this pathological condition, she was ordered to receive ℥ iv. of tinct. digitalis, every four hours. At the time this was prescribed her pulse had not fallen below 118. She took the medicine for five days with perfect regularity (except during the hours of sleep), her pulse ranging between 96 and 110. During this time the renal symptoms were improving.

On the sixth day the pulse was irregular—at 70. Ordered only three doses during the day. On the seventh day, her pulse was 60 and irregular. Discontinued the medicine.

During the next four days (patient taking no medicine) pulse averaged 52, was very irregular, and, at times, was as low as 46.

On the twelfth day, April 4th, the pulse became regular at 56.

From this time no irregularity was observed, the frequency of the pulse gradually becoming normal. I took the trouble to ascertain that the tincture was of the same purity when the prescription was renewed, during its use, as when originally ordered.

Edward L. Partridge, M.D.

13 Charlton St.

AN EASY METHOD OF REDUCING FEMORAL HERNIA.

To the Editor of The Medical Record.

Sir:—In the afternoon of May 27, 1878, I was called to visit Mr. J. T., a robust young man, aged twenty-five, a laborer, who, on the day previous to my visit, while engaged in heavy lifting, felt, as he said, "something give way in his left side." From that time he suffered pain in the left inguinal region, and in the morning the pain was so severe that he kept the bed, and on discovering a small enlargement in the femoral region sent for me in the afternoon. On my arrival I found the trouble to be a femoral hernia in a strangulated condition. I at once placed him in the position usually occupied for the reduction by taxis. I then made several attempts for its reduction, but failed. My teachers, and all authors on surgery that I know, are very explicit in regard to this *one position* as being the *sine qua non* for success. But, meeting with failure in my attempts, I thought that if I could get the body in a position that would relax the parts and at the same time compel the intestines to gravitate from the opening, by their traction on the protruded portion, it might expedite the replacement. The position devised was this: I placed him on his face, then told him to rest on his forehead and elbows, and with my assistance he raised himself and placed his right foot on an elevation of seven or eight inches above the plane upon which his head rested, and the right side was supported against the ceiling of the room. He began to remonstrate against standing on his head, as he termed the position, but as he had refused to take an anæsthetic, and promised that he would do anything desired rather than submit to anæsthesia, he soon became reconciled to the requirements. I then took his left foot in my right hand and flexed the leg upon the thigh, and that upon the abdomen. With my left hand I kneaded the abdomen a moment, then with the index finger of the left hand I made gentle pressure on the protrusion in the direction of the femoral outlet. The result was all that could be desired. The reduction was almost immediately accomplished as I began pressure. In the above position we get a good relaxation of the parts, and a gravitation of the intestines which we do not get in the usual position. I therefore deem the method worthy of trial by the profession.

F. D. Lamb, M.D.

Great Bend, Penn.

New Instruments.

DR. JACOB A. WOOD'S CANULA FOR PARACENTESIS ABDOMINIS.

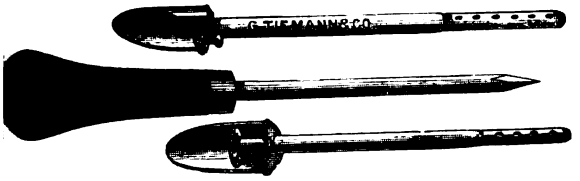
MODIFIED BY R. A. HARRIS, M.D.,
DOVER, N. J.

AN excuse for presenting improvements upon an instrument so recently introduced to the public may be found in the fact that it is one for the operation of paracentesis abdominis, and hence liable to be required at some time, if not frequently, by every physician. I feel quite sure that very many will gladly hail an improvement upon the antique trocar, whereby the stoppage of flow, and the consequent embarrassment, can in a great measure be obviated.

My interest in this improvement does not date to the employment of Dr. Jacob A. Wood's invention; for, while operating with the old or common trocar and canula, I also conceived the idea of an inner metallic tube, and forwarded Messrs. Tiemann & Co. specific directions for making the same, before the history of a similar invention was brought to my notice.*

To Dr. Wood, however, is due the honor of first thought, for I have since learned that he devised and had constructed the inner canula in 1855, since which time he has employed it in practice. The two devices, acting upon the same principle, were, however, somewhat differently constructed. The inner end of Dr. Wood's tube was open and squarely cut like an ordinary canula, and that portion extending beyond the outer canula, through which it was inserted, was perforated by numerous small holes. The inner extremity of my canula was smooth, oval, and closed, with four long fenestræ, instead of the small perforations for the entrance of the fluid. The long slots or fenestræ allow partial collapse of the intermediate portions of the cylinder, are liable to pinch the viscera when withdrawn, and on this account are objectionable. The oval closed end, however, is desirable, for while the flow is not thereby lessened, it permits free manipulation without producing the uncomfortable irritation so often caused by the open-end canulas.

I have added a stop-button to prevent the inner canula being expelled during the process of tapping.



I have repeatedly, and with great satisfaction, employed the canula of Dr. Wood as modified by myself, and can commend it to the use of others. When operating it is, perhaps best to allow the fluid to escape from the ordinary canula as long as it will do so in full stream, after which employ the inner canula until the operation is complete. Change of posture and manipulation of the instrument often greatly assist the evacuation.

The accompanying wood-cut illustrates the improvements.

* *Vide* MEDICAL RECORD, Sept. 1, 1877.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 10, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.
August 3, 1878..	0	11	40	1	5	23	0
August 10, 1878..	0	18	28	1	3	26	0

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE, WASHINGTON, D. C., Aug. 10, 1878.

NATIONAL QUARANTINE REPORT.—Abstract of sanitary reports received during the past week under the National Quarantine Act:

Port Eads.—Yellow fever has appeared at Port Eads—mouth of Mississippi, on 5th inst. Thirteen cases, but no deaths, to yesterday noon.

New Orleans.—Since last report 236 cases of yellow fever and 65 deaths, making 431 cases and 118 deaths to yesterday noon. At

Cincinnati there have been only 2 cases of yellow fever (one previously reported) both from New Orleans—one fatal. A young man arrived at

Memphis, from New Orleans, July 30th, who died of yellow fever Aug. 3d. Steamer "Golden Crown" from New Orleans had one case of yellow fever on passage up—a lady, who died on board and was buried at

Caledonia, Ill., Aug. 4th. Two deck-hands supposed to have yellow fever landed at *New Albany*, Ind., July 25th, proved, upon investigation by Surgeon Long, of this service, not to have been that disease. On a steamer at Vicksburg, a case arrived from Cairo, originally from New Orleans; died of yellow fever Aug. 9th.

Key West.—No new cases of yellow fever past week to noon to-day.

Havana.—Two hundred and thirty-nine deaths from yellow fever and twenty-one from small-pox during two weeks ending Aug. 3d.

Matanzas.—From July 26th to 29th no yellow fever cases, but on 30th four new cases were reported in bay, and others have since occurred daily to Aug. 2d—date of advice.

Cardenas.—Yellow fever in city, but not yet among shipping.

Sagua la Grande, Cuba.—One fatal case of yellow fever in shipping.

Bombay.—Twenty-six deaths from cholera, week ended June 18th.

Malta.—Outbreak of cholera on British troop-ship from India was brought under control by authorities, and disease did not lodge in Malta—advices to July 18th.

Reports from other places indicate good health.—JNO. M. WOODWORTH, *Surgeon-General, U. S. Marine Hospital Service.*

REGULATIONS FOR THE STUDY OF MEDICINE IN FRANCE.—The following is the text of the decree of June 20, 1878, relating to the conditions that must be fulfilled in order to obtain the degree of doctor of medicine in France:

Art. 1. The studies to obtain the degree of doctor of medicine shall last four years; during the first

three years they may be carried on in the facultés, in the écoles de plein exercise, or in the écoles préparatives de médecine et de pharmacie.

The studies of the fourth year can only be made in a faculté or in an école de plein exercise.

Art. 2. The candidates must produce at the beginning of the first term the diploma of bachelor of sciences, limited in the mathematical part.

They must undergo five examinations and defend a thesis. The second, third, and fifth examinations are divided into two parts. The examinations at the end of the year are suppressed.

Art. 3. The five examinations are on the following subjects:

First Examination. — Physics, chemistry, medical natural history.

Second Examination.—First part, anatomy and histology. Second part, physiology.

Third Examination.—First part, surgery, midwifery, operative medicine. Second part, internal medicine, general pathology.

Fourth Examination. — Hygiene, legal medicine, therapeutics, materia medica, and pharmacology.

Fifth Examination.—First part, surgical and obstetrical clinics. Second part, medical clinics, practical demonstrations in pathological anatomy.

Art. 4. The first examination takes place after the fourth term and before the fifth; the first part of the second examination, after the tenth and before the twelfth term; and the second part, after the twelfth and before the fourteenth term. The third examination cannot be passed until the expiration of the sixth trimestre of study.

Any candidate who does not pass the first examination in November, at the latest, will be put back to the end of the scholastic year, and will not be permitted to take out any inscription during the course of that year.

Art. 5. Candidates for the doctorate, pupils of écoles de plein exercise or of the écoles préparatives, are examined by the facultés at the periods fixed in the preceding article. They may be allowed, however, without interrupting their studies, to defer the first examination until after the twelfth term. In that case they must pass the second examination (both parts) before the thirteenth term, and, from the commencement of the second year of study, are subjected to interrogations at the end of each semestre, the results of which are transmitted to the universities, to be taken into account in the examinations for the doctorate.

Art. 6. The inscriptions for officier de santé must not, under any circumstances, be converted into inscriptions for the doctorate, in the case of pupils following their course of study; this conversion may be permitted in the case of officiers de santé who have practised medicine for at least two years.

Art. 7. Practical work in the laboratory, dissection, and residence near the hospitals, are obligatory. Each annual period of work in the laboratory and dissection comprises a semestre. Residence near the hospitals must continue for at least two years.

Art. 8. The fees to be paid by the candidates for the degree of doctor of medicine are fixed as follows:

16 terms, at 32 fr. 50 c.	520 fr.	or	$104.00
8 examinations, at 30 fr.	240 "	"	48.00
8 certificates of proficiency, at 25 fr.	200 "	"	40.00
Outlay for materials used in practical work	160 "	"	32.00
Thesis	100 "	"	20.00
Certificate of proficiency	40 "	"	8.00
Diploma	100 "	"	20.00
	1,360 "	"	$272.00

Art 9. Any candidate, who, without an excuse that is acceptable to the jury, fails to answer to his name on the day that has been indicated to him, will be sent back for three months, and will forfeit the fees paid by him for the examination.

The remaining articles of the decree are of little interest, except Art. 11, which enacts that the decree shall go into force on the 1st of November, 1879. and that students inscribed before that date will be allowed to choose between the new mode of examinations and the one now in force. In any case, however, they must be examined on all the subjects enumerated in Art. 3.

NEW ADULTERATION OF THE SULPHATE OF QUININE.—Dr. Jaillard reports (*Arch. Méd. Belg., Jour. de Méd. de Bruxelles*) a new method of adulterating the sulphate of quinine, which consists in the addition of sixty per cent. of nitrate of potassa. The mixture, prepared with great skill, gives a saline material formed of needle and mixed crystals, silky-looking, and greatly resembling those of sulphate of quinine. Nevertheless it is easy to distinguish them from the pure substance; they have indeed a bitter taste, but they are also a little salty; they dissolve almost entirely in cold water, and more feebly in alcohol at 90° of purity, even when boiling. Besides these, there are several other methods of discovering the fraud mentioned by this author. We cite only the employment of the microscope, which shows in the mixture the great prisms of saltpetre by the side of the fine needles of sulphate of quinine, and one other process of great simplicity. This consists in placing on the point of a knife a small quantity of the salt to be examined, and submitting it to the action of a flame. If the article is adulterated with nitre, it burns with a flame and leaves a white residue composed of potassa. If, on the contrary, it is pure, it burns with a fuliginous flame and leaves a puffed-up pellicle of carbon.—*Gazette Médicale de Paris*, May 11, 1878.

TREATMENT OF SCARLATINAL SORE THROAT.— In order to diminish the pain which accompanies deglutition in scarlatina, Dr. Griffith recommends painting the fauces several times daily with a solution of one drachm of chloral hydrate in five drachms of pure glycerine.

THE second annual meeting of the American Dermatological Society will be held at the Grand Union Hotel, Saratoga Springs, New York, on the 27th, 28th, and 29th days of August.

DR. JOHN C. BEALES, whose death was recently chronicled in the daily papers, was born in Norfolk, England, in 1803. He received his medical education at St. George's Hospital, in London, and was a private pupil of Sir Benjamin Brodie, and afterwards prosector and dresser to Sir Astley Cooper. Receiving an extremely lucrative appointment as surgeon to English mines in Mexico, he went there in 1824. A few years later he moved to the city of Mexico, where he engaged in private practice, and was made Professor of Obstetrics and Surgery in the old college of the city. About the year 1839 he came to New York, and within a few months entered into partnership with Dr. William Barrow. He was one of the founders of the St. George's Society, and for ten years its president. Though a sufferer for the last thirty years from an enlarged heart, he continued the active practice of his profession until within two years. He leaves behind him an unusual number of devoted friends, bound to him both by strong professional and personal ties.

Original Lectures.

LECTURES ON THE LOCALIZATION OF SPINAL AND CEREBRAL DISEASES.*

By E. C. SEGUIN, M.D.,

CLINICAL PROFESSOR OF DISEASES OF THE MIND AND NERVOUS SYSTEM IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

Lecture VI.

SUMMARY:—LESIONS OF THE GREAT GANGLIA AT THE BASE OF THE BRAIN, AND OF THE WHITE SUBSTANCE OF THE HEMISPHERES.—SKETCH OF THE PHYSIOLOGICAL ANATOMY OF THESE PARTS: LESIONS OF THE GREAT BASAL GANGLIA; OF THE INTERNAL CAPSULE, AND OF THE REMAINDER OF THE WHITE SUBSTANCE.—LESIONS OF THE CEREBELLUM.

GENTLEMEN:—The great ganglia at the base of the brain are from before backward, the nucleus caudatus and the nucleus lenticularis of the corpus striatum (the intra- and extra-ventricular portions of the corpus striatum, according to English and American books), the thalamus opticus, and the corpus quadrigeminum (or tubercula quadrigemina). These masses of gray matter are of course double, *i. e.*, symmetrically arranged on either side of the median line. Their relations to adjacent portions of the brain are of great importance to us, and worthy of a somewhat detailed study.

In very general terms, it may be said that all of these bodies have at least a duplex connection, one superior with the cortex of the brain, the other inferior with the various parts which make up the mesencephalon. More particularly, the nucleus caudatus (intra-ventricular nucleus of the corpus striatum) sends bundles of fibres downward into the crura, and the same is true of the externally-placed nucleus lenticularis. So we say that both parts of the corpus striatum are intimately connected with the basis cruris cerebri.

On the other hand, the thalamus and corpus quadrigeminum are intimately united with the nucleus of the tegmentum, and send bundles of fibres into and through it, in the posterior or sensory system of the mesencephalon. Physiologically, we may look upon the basis cruris and its superadded ganglia as motor in function, and upon the tegmentum cruris as sensory and as the seat of performance of important and complex reflexes.

As regards the other connections of these bodies, they are probably connected with their homologues across the median line, and superiorly with various parts of the cortex. There would seem to be, judging from a series of cases of cerebral atrophy, a bundle of nerve-fibres connecting the nucleus caudatus of one side with the opposite half of the cerebellum by way of the processus cerebelli ad cerebrum. At any rate, great atrophy of the right hemisphere (for example) and corpus striatum is usually accompanied by atrophy of the left hemisphere of the cerebellum. I need hardly remind you of the intimate union between the optic tracts and the corpus quadrigeminum and the external portion of the thalamus.

The white centre of the hemispheres is made up of many separable fasciculi, the physiology of many of which is as yet obscure. In the first place, we can demonstrate in it commissural bundles running in various directions: transversely, connecting various portions of the cortex of both hemispheres by way of the corpus callosum and the so-called commissures; others extend longitudinally in one hemisphere, connecting the convolutions of one lobe with those of another; yet others simply bind together adjacent convolutions Secondly, there are heavy masses of fibres extending from the basal ganglia to the convolutions of the hemispheres, constituting a great part of what is known as the corona radiata. Thirdly, and most important in pathology to-day, is a bundle of white substance in each hemisphere, which directly unites the cortex of the brain with the crura, pons, and spinal cord—the so-called internal capsule.

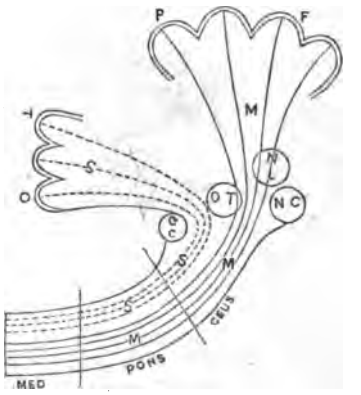


Fig. 7.—Diagram of course of sensory and motor tracts in the mesencephalon and hemispheres. S, sensory tract in posterior region of mesencephalon, extending to O and T, occipital and temporal lobes of hemispheres; M, motor tract in basis cruris, extending to F and F, parietal and (part of) frontal lobes of hemispheres: C C, corpus quadrigeminum: O T, optic thalamus; N L, nucleus lenticularis; N C, nucleus caudatus.

This fasciculus appears (upon anatomical and physiological evidence) to be the continuation of the sensory and motor tracts which we have studied in the basis cerebri. The extension of the sensory tract upward from the crura into the internal capsule is not so clear as is the continuity of the motor tract anteriorly. This, denominated by some the peduncular tract, and designated in Lect. V. as the *direct cerebral motor tract*, can be traced by dissections, by physiological experiments, by embryology, and lastly by the help of pathological processes (descending degeneration) from certain convolutions of the cortex cerebri into the anterior half or two-thirds of the internal capsule, into the crus cerebri, the pons, the medulla, and (in accordance with the law of decussation—*vide* Lect. IV.), into both halves of the spinal cord. The composition and extension of the internal capsule is rudely represented in diagram by Fig. 7. Its exact position in the hemisphere and its relations to other parts of the encephalon is well shown in Fig. 8, modified from a cut in Prof. Charcot's Lectures on Localization in Cerebral Diseases. This represents a transverse vertical section of the hemispheres made through the middle of the optic thalamus. The internal capsule is seen to lie between the external border of the thalamus and the nucleus lenticularis of the corpus striatum. In this location the bundle is much compressed, and seems to have little or no connection with the gray bodies just named; it expands in every direction after passing them, and its anterior fibres are ultimately distributed to the middle regions of the cortex cerebri—motor district—embracing the third frontal, the posterior extremities of the first and second frontal, the ascending frontal convolutions,

* Delivered at the College of Physicians and Surgeons during the months of December, 1877, and January, 1878.

also the ascending parietal and first parietal convolutions; also, lastly, to the continuation upon the inner surface of the hemisphere of the ascending frontal and parietal convolutions which make up the paracentral lobule. The posterior third of the internal capsule is very probably distributed to the occipital, temporal and second parietal convolutions—the supposed sensory gyri.

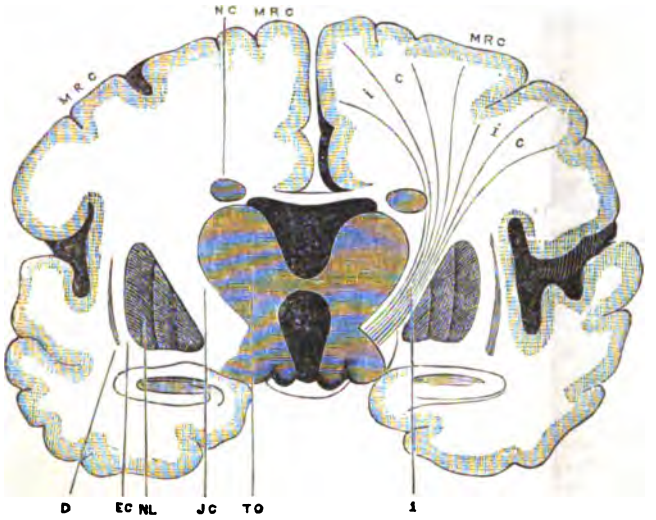


FIG. 8.—Modified from Charcot's diagram, to show position, relation, and distribution of the internal capsule as seen in a vertical transverse section of the brain on a level with the greatest development of T O, thalamus opticus. I C, location of internal capsule; N L, nucleus lenticularis; E C, external capsule: D, claustrum; N C, nucleus caudatus; M R C, motor regions of cortex cerebri; 1, fibres representing the radiation of the internal capsule vertically to the motor region of cortex.

Besides common sensory tracts, the posterior part of the internal capsule contains fibres which are directly or indirectly connected with the special sense organs, viz., the optic, olfactory, gustatory, and acoustic. This is shown by the fact that total hemi-anæsthesia in man results from lesions involving the internal capsule; from experiments upon animals, whereby certain occipital or temporal convolutions being removed, blindness or deafness is caused on the opposite side.

The physiology of the great ganglia, commissural fibres, and internal capsule is far from satisfactorily marked out. Many glaring contradictions are apparently proved by the experiments of different observers. It would appear well settled that the corpus quadrigeminum and the corpora geniculata are a part of the optic apparatus; that the nucleus caudatus and the nucleus lenticularis have motor functions of some sort. The greatest uncertainty exists, I think, concerning the attributes of the thalami optici.

On the other hand, we now know pretty positively that most of the sensory paths for the body pass in the posterior part of the internal capsule, laceration of this part in animals being invariably followed by hemi-anæsthesia on the opposite side. That the thalamus has anything to do with the perception of sensations is rendered doubtful by the occurrence of cases in which lesions, strictly limited (*i. e.*, not pressing on adjacent parts) to the thalamus have produced no special symptoms. The same objection (pathological) can be urged against the view that the nucleus lenticularis has important motor functions. That the anterior part (two-thirds?) of the capsule consists of motor fibres is likewise quite well established by experiments upon animals and by the study of pathological cases.* What the functions of the various commissural fibres may be, is, at the present time, only a matter of speculation more or less logically constructed.

1. LESIONS OF THE BASAL GANGLIA.

The generally received statements that lesions of these bodies produce definite symptoms—lesions of the nucleus lenticularis and nucleus caudatus paralysis, and lesions of the thalamus opticus anæsthesia—are, I think, very questionable. From the evidence now before us it seems doubtful if lesions of the nucleus lenticularis, and of the thalamus, produce any symptoms except by exerting pressure upon the internal capsule lying near by. At any rate, cases of destruction of large parts of these bodies without symptoms are on record. As regards the nucleus caudatus, it is possible that its destruction is followed by hemiplegia and secondary degeneration; but on the other hand, it must be admitted that almost all lesions of this body are so placed, and of such a nature, as to cause pressure upon the motor portion of the internal capsule. This is especially true of hemorrhage, as shown by Prof. Charcot in his recent lectures on the brain.

2. LESIONS OF THE INTERNAL CAPSULE.

These, on the other hand, produce, as shown by the recent study of pathological evidence, and by experiments upon animals, constant symptoms. If the anterior half or two-thirds of the capsule be injured, we have hemiplegia on the opposite side of the body; more or less perfect hemiplegia according to the exact seat and size of the lesion. It will be readily understood that lesions (especially hæmorrhage and tumors) of parts adjacent to the capsule, such as the lenticular and caudate nuclei, the white centre of the frontal lobe, etc., may by pressure bring about a similar result. Besides paralysis, descending secondary degeneration is an inevitable result of lesions of the internal capsule. This lesion can be traced downward through the whole length of the direct cerebral motor tract so frequently referred to before, to the lower end of the spinal cord. Lesions of the nucleus caudatus are also said to produce the same results, but recent researches (Flechsig) throw doubt on this.

If the posterior part of the internal capsule be injured directly, or indirectly by the pressure of lesions in adjoining regions, there is produced anæsthesia, more or less complete, on the opposite side, usually with only slight paralysis. If the lesion be considerable the anæsthesia is absolute; *i. e.*, the special senses and common sensory nerves lose their function, or more properly speaking, impressions coming through these cannot reach the perceptive centres. Hemiopia is never (?) thus produced, and Charcot explains this by supposing a second semi-decussation to take place

* Since these lectures were delivered, a brilliant and final proof of the motor functions of the anterior part of the internal capsule, and of the continuity of the motor convolutions and the direct cerebral motor tract has been advanced by the French experimenters, Franck and Pitrès (*Le Progrès Médical*, Jan. 19, 1878). These physiologists found that by faradizing those parts of the white centre of the hemisphere which lie underneath the so-called cortical motor centres, they were able to produce definite movements in parts of the body on the opposite side. This tract of white matter, constituting the anterior portion of the internal capsule, contains physiologically distinct fasciculi which are connected on the one hand with the motor districts of the cortex, and on the other hand with peripheral parts of the body across the median line.

in some part between the chiasm and the internal capsule; probably in the corpus quadrigeminum. A reference to Fig. 6, Lect. V., will, I trust, make this hypothesis plain.

Yet a third symptom results from lesions of the internal capsule, viz., choreiform movements following hemiplegia and hemi-anæsthesia. These movements vary in degree and type from true athetosis to ataxia, from chorea to tremor, and constitute an interesting symptom-group, well worthy of further study. In my own cases of post-hemiplegic chorea, hemi-anæsthesia of slight degree was present, and in one case lateral hemiopia.

Extensive lesions of the central parts of the hemispheres may produce, besides the specific signs named above, a number of other symptoms. Thus, suddenly produced lesions (hæmorrhage, softening) will nearly always cause conjugate deviation of the eyes and head. The patient, though insensible, turns his eyes and head constantly to one side, toward the injured hemisphere, and away from the paralyzed side. In spite of a recent attempt to impeach the value of this symptom of hemispheric injury, I am disposed to attach value to it. Great increase in the bodily temperature also follows large injuries.

Other lesions, such as cause pressure, and slowly grow to a great size (tumors), cause, in addition to the specific signs dependent upon their exact location, the change within the eye which we call neuro-retinitis, (*vide* Lect. V.). They will also usually produce convulsions.

As regards the remainder of the white substance, such as the central regions of the frontal, occipital, and temporal lobes, modern critical study of recorded cases would seem to indicate that lesions involving these parts in such a way as not to press upon the internal capsule and nucleus caudatus, do not give rise to any symptoms; *e. g.*, an immense abscess may occupy the temporal and occipital lobes, or the anterior part of the frontal lobe, without causing paralysis or anæsthesia. Anatomy and experimentation, however, seem to indicate that lesions of the occipital and temporal lobes should give rise to sensory symptoms: and a more careful study of cases of disease in these parts is just now a desideratum.

We do not know any more relative to lesion of the great commissural bundles which unite the two hemispheres and different parts of one hemisphere. The cases of congenital absence of the corpus callosum on record do not teach anything definite.

3. LESIONS OF THE CEREBELLUM.

I add a few words relative to another *terra incognita* in the brain, the cerebellum. Its situation is known to all of you, but there are a few points in its anatomy to which I would specially invite your attention. In the first place, this great mass of nervous matter is closely bound down by a strong fibrous covering (a bony septum in some animals), the tentorium cerebelli. This fold of dura mater probably serves important purposes in health, but in case of disease in the cerebellum it causes pressure-effects to be transmitted chiefly forward and downward. This is important to bear in mind when studying the effects of cerebellar lesions. Second, the cerebellum is remarkable for its numerous connections with other parts of the nervous system. Fibres connect each of its hemispheres with the nucleus caudatus and cerebral hemisphere of the opposite side, by means of the crura cerebelli ad cerebrum. Other fibres, forming heavy bundles, make up the crura ad pontem or lateral peduncles of the organ; extending deeply into the white and gray substances of the mesencephalon. It is probable that each half of the cerebellum is thus connected with the opposite half of the pons; possibly some fibres are strictly commissural, *i.e.*, unite the two hemispheres of the organ after passing over the pons. Lastly, the cerebellum is connected with the medulla and spinal cord. It forms, by means of the crura cerebelli ad medullam, close connections with the olivary bodies, and with the external portion of the lateral columns (near the extremity of the posterior horns) in the spinal cord. It has been claimed that some cranial nerves (third, fourth, and acoustic) have been traced into the cerebellum, but the evidence on this point is unsatisfactory. Third, the cerebellum overlies highly important organs, and this proximity serves to explain much of the semeiology of its lesions. In front of it is the corpus quadrigeminum and the tegmentum cruris, with its contained vaso motor (and convulsive?) centre; beneath it the medulla oblongata, with its floor and such vital nerves as the pneumogastric and the spinal accessory.

The physiology of the cerebellum is at the present day quite unknown. That it serves for purposes of co-ordination in a direct and positive manner is disproved by experimentation and pathology; that it is a centre for the movements of the eyeballs (Ferrier) is equally doubtful; and so is the view that it is the seat of psychical attributes of an emotional character. Mitchell's hypothesis, that it is a store-house of nerve force for use in emergencies, is plausible but unproven. The mechanism and purpose of the cerebellar connections is likewise not understood.

As regards the diagnosis of lesions of the cerebellum, I must admit that in the very numerous symptoms produced by them I do not know of one that is characteristic. In other words, lesions strictly limited to the substance of the cerebellum produce no definite symptoms: and on the other hand, the symptoms which we observe in cerebellar diseases are the result of pressure-effects upon adjacent parts. Thus, the affections of sight so common in cerebellar lesions are caused by pressure upon the corpus quadrigeminum or the corpora geniculata, and also upon the origins of the third, fourth and sixth nerves. The nausea, vomiting, and sudden death may be explained by irritation and paralysis of the nuclei of the pneumogastric nerves in the floor of the fourth ventricle; convulsions, by pressure upon the tegmentum cruris; the imperfect hemiplegia or general paralysis, by a similar action upon the motor regions of the mesencephalon. The diagnosis (assisted by predominance of pain in the occipital region) must be made chiefly by exclusion. A symptom of great importance when present is titubation. This has been termed cerebellar ataxia, but as a descriptive term titubation is better. The patient walks with his feet separated, his body bent a little forward and swaying, his hands and arms in use to preserve his equilibrium. There is no true ataxic jerking, no want of harmony between antagonistic groups of muscles, no choreic movements, no tremor.*

* After the delivery of this lecture Prof. H. Nothnagel of Jena, published (in *Berliner Klinische Wochenschrift*, 1878, No. 15) the results of his analysis of more than two hundred and fifty cases of cerebellar disease. His conclusions, I am happy to say, are substantially equivalent to what has been said above. However, Prof. N. is disposed to admit one symptom—cerebellar ataxia—as characteristic of injury to the cerebellum, or more properly, to one of its smaller parts, the superior vermiform process. N. says that by cerebellar ataxia we are to understand a perversion of equilibrium closely resembling that observed in alcoholic intoxication; the patient titubates, stands with feet wide apart: if he be barefooted the toes are seen in active motion; and in walking the body sways a good deal, the foot is brought down with ball or with heel first irregularly; closing the eyes sometimes makes standing and walking worse, sometimes not. In the recumbent position there is no ataxia. In the large majority of cases the upper extremities remain free from inco ordination.

DIAGNOSIS OF DISEASE—TUBERCLE IN GENERAL—ACUTE MILIARY TUBERCULOSIS (PULMONARY).

BEING THE ABSTRACT OF A LECTURE, MARCH 7, 1878, AT THE BELLEVUE HOSPITAL MEDICAL COLLEGE,

BY BEVERLY ROBINSON, M.D.,

NEW YORK.

GENTLEMEN:—In beginning a course of lectures on diseases of the lungs, it seems only proper that I should say a few words, by way of introduction, on the general question of physical diagnosis.

By this term "diagnosis" is usually meant that portion of medical science which specially relates to the distinction or separation of diseases one from another. There is of course a "medical diagnosis" in a more restricted sense, which refers to affections in the domain of internal pathology, as distinguished from a "surgical diagnosis" which has taken for its field of insight and work all matters relating to external pathology. In diagnosis we have a science and an art combined. To the science properly belongs our acquired knowledge of the deviations from the laws of health, our familiar acquaintance with the accurately defined morbid conditions, the symptoms which make known each special pathological process, the power we possess by defined methods of reasoning to arrive at more or less certain final conclusions. In applying the *art* of diagnosis, our senses of sight and hearing, of touch, of smell, of taste, may all be put into requisition. These senses may do their work unassisted, or they may call to their aid many modern inventions which give additional certainty to our researches. The microscope widens greatly our unaided vision and enables us to behold the mysteries of the growth and structures of our tissues; chemistry bids us analyze, or make, by synthetic union, many substances of importance to the animal economy. As we shall see later on, the thermometer and stethoscope help the clinician daily and hourly in his interpretations of morbid effects. In discovering certain symptoms of disease, the merest beginner may soon prove himself capable; in tracing out the origin and nature of obscure forms of malady, the most matured medical mind is frequently at fault. When we have found singly, or collectively, the symptoms of a given disease, we should endeavor to determine their signification. And herein the knowledge acquired by our predecessors is of service to us. It enables us frequently to make of a science of what might or should be, a science of genuine, rigid affirmations. It will not do, however, to consider any mere group of symptoms; all attendant circumstances should be investigated, and our knowledge of other subjects, broad though it be, may be most useful in establishing our convictions. The essential points must of course be first weighed, and their tendency to attach themselves to a particular organ, or function, not overlooked; but, in addition, all secondary symptoms have their value, and the previous history should likewise be interrogated. Sometimes a few characteristic features make a diagnosis evident after a very brief examination; again, all that concerns the individuality or general condition of the patient must be clearly exposed, and the *non*-existence of some confusing affection must be established. Never should minor points be brought forward too prominently, and our treatment should be such as to give still greater light to our research. Finally, it is well to remember that treatment and not diagnosis is the ultimate end of all clinical investigation, and we will do well to keep this fact present to our minds.

In the investigation of diseases of the chest we are in the habit of using the following methods of examination, viz.: inspection, mensuration, palpation, percussion, and auscultation. The details in reference to their manner of application are found in text-books on this subject, and need not be recapitulated at present. No more should the various mappings-out of the chest be severally detailed. All these divisions are arbitrary and misleading, except the anatomical one, and this latter I therefore greatly prefer in my study of abnormal changes. All physical diagnosis, to be well known, must be studied at the bedside, or upon patients who exemplify morbid conditions. Books are good adjuvants, but not solely to be relied upon. What the amphitheatre and lecture-room teach is far more durable and important to the practitioner than theories evolved in the silence of one's study.

I shall now consider with you a most interesting and somewhat rare form of pulmonary affection, viz.: acute miliary tuberculosis. The bibliography of this subject merits attention, and it would be ill-judged completely to ignore it. The names of Buhl, Jürgensen and Cohnheim in Germany, Fox in England, and Barthez, Thaon, and Charcot in France, stand out prominently in an extensive list of those who, in later years, have made personal researches in regard to the real nature of tubercle. Unfortunately, our own countrymen have contributed but little towards the solution of this problem. As you are aware, much obscurity exists in the minds of many practitioners as to the meaning of the term "tubercle." The opinions have been various, and each shade of belief has been stoutly upheld by devoted adherents.

Laennec first (1837), and then Rokitansky (1842), were of opinion there was only one kind of phthisis, and this phthisis was denominated by them "tuberculosa." The gray granulation was the sole elementary factor of all consumptive changes, and to its subsequent development was entirely due all those cheesy degenerations which are frequently met with in different viscera. At a later period, when it was found that many cheesy masses were wholly the products of simple inflammation, the theory of Laennec commenced to lose importance. Virchow, notably, held that the gray granulation alone should be called "tubercle," and insisted that pathologists should endeavor to prove *what cheesy products* were inflammatory, and *what* were degenerated tubercles. Shortly, then, there were established two kinds of phthisis, one inflammatory, the other tuberculous, and this distinction continued to be upheld by Niemeyer and other German authors, notwithstanding a similarity of etiology, symptoms, and occasionally, too, of anatomical conditions.

Villemin (1866) then commenced to demonstrate experimentally the infectious nature of tuberculosis, and it was noted by other observers that miliary tubercles might result from *resorption* when there were pre-existent cheesy conditions in the body. Thus, miliary tubercle became a *secondary*, and not a *primary* lesion. It was further demonstrated that as certain animals (guinea-pigs, rabbits) had a predisposition to the formation of tubercles, so human beings of a scrofulous constitution had this same tendency markedly developed. In them inflammation takes a peculiar course: the cheesy infiltrations and suppurations of mucous membranes elaborate a poison which, when absorbed, produces tubercles.

Here then is the real connection existing between scrofula and tuberculosis. And tubercle may be defined as a "circumscribed" focus of scrofulous inflam-

mation excited by resorption of some irritating substance and taking its origin in a fixed cell of the vascular connective tissue (Rindfleisch). The "giant-cell" is an enlarged endothelial or connective-tissue cell, with an increased number of nuclei. It is not characteristic of tubercle, and may occur in many other kinds of growths.

Formerly acute miliary tuberculosis of the lungs was synonymous with acute phthisis. Now, most reliable authors separate these diseases, as the miliary granulation is not an invariable accompaniment of consumption. Moreover, the symptoms, course, prognosis, and therapeusis of these affections are not similar. Surely, therefore, there exist sufficient grounds for a distinction to be made. They are approached by their etiology, inasmuch as the miliary tubercle may be found in lungs where the lesions of acute or chronic phthisis are present, and also in organs which previous to their existence had been entirely healthy. The origin of such tubercles can, however, usually be found in some caseous mass existing elsewhere in the body, and whose particles have been transported by the vessels to a region far removed. Mangetus and Bayle were the first authors who recognized acute miliary tuberculosis as a distinct form of disease. Laennec and Louis describe it under the head of acute phthisis. Leudet made three well-defined varieties of it, basing each variety, of course, upon a difference of general appearance in the symptoms of disease, rather than upon a separation of anatomical lesions. These varieties have been called a typhoid, a catarrhal, and a latent one. The former certainly demands most consideration as being the one with which typhoid fever is frequently confounded.

The only direct cause of acute miliary tuberculosis of the lungs which has yet been found is the absorption of caseous matter.

From this source, in whatever organ it be present, corpuscular elements are transported by the lymphatics and blood-vessels, and produce irritation and its results at the points where secondary formations are effected. It is at once understood that acute miliary tuberculosis must be regarded as an infective disease arising from absorption; it is no longer to be thought of as an acute variety of pulmonary consumption. This belief, moreover, is supported by the great frequency of the pulmonary seat of the disease, and by the fact that it is preceded usually by inflammatory lesions of the apices of these structures. While, however, pulmonary consumption is one of the most frequent of its causes, it may be brought on by many other conditions, such as caseous glands, caries of bones, inspissated abscesses, and ulcerations of mucous surfaces (typhoid fever). Acute miliary tuberculosis is not limited to individuals whose health is impaired. It may also occur in apparently vigorous constitutions. I myself have met with such cases, of which a notable example occurred lately in my service at Charity Hospital.

The post-mortem of this patient was made, and not only the lungs were studded with miliary tubercles, but also the coverings and interstitial tissue of many viscera. No focus of original inflammation or cheesy degenerative changes could be detected after rigid and careful examination. We perceive, therefore, that although this disease often manifests itself as an aggravation of pre-existing changes, it occurs, at times and in so far as our limited insight extends, as an acute primary affection. The initial symptoms are, in this case, fever, prostration, headache, and insomnia. The respirations are increased in frequency, though without marked dyspnœa at first. Auscultation of the lungs reveals in the beginning sonorous rhonci, soon followed by crackling râles. Then dyspnœa appears and grows by rapid degrees very intense. The pulse ranges between 120 and 140 in the minute. The temperature, according to Rindfleisch, is not very high. In my own experience and that of certain other writers, it has been excessive more than once, and generally is much elevated. The most characteristic feature of the temperature tracing in these cases has been the time of its maximum elevation, which usually occurs in the morning. The evening temperature is often relatively low, and between the two considerable differences may be noted (4°–6°). This fever is accompanied with profuse sweatings. It has no definite type, and variability is its evident feature. The frequency and feebleness of cardiac contractions, besides being made known directly through auscultations, are doubtless somewhat responsible for the cyanosis of the face and extremities. The nervous symptoms are uncertain and do not help the diagnosis except where the meninges are implicated. The digestive system is far from showing normal functions, but it never betrays the nature of the ailment in a reliable manner. At one time we may have absolute anorexia, a dry mouth, and obstinate constipation.

Again, the buccal cavity is moist, the bowels rather loose, the abdomen slightly enlarged and tympanitic. With a somewhat enlarged spleen, great and daily increasing prostration, a notable tendency to a comatose condition, and urine loaded with the excreta of febrile movement, one can appreciate how readily typhoid fever is thought of. But in acute miliary tuberculosis the chest-symptoms, when carefully analyzed, help us in a measure to solve our difficulty. Here we find an acute diffuse bronchial catarrh apparently, but with a cough which is more constant and fatiguing, unless the capillary tubes be implicated. The sputa, too, are abundant, colorless, and viscid. There are no epistaxes, no roseola in the second week, and a march which is very rapid and fatal. In this disease and in acute bronchitis, percussion generally remains negative, though it may vary. The rapid loss of strength and frequent breathing without dyspnœa are signs which shall help us most to make a differential diagnosis. In bronchitis of the small tubes, the best diagnostician will be at fault if he relies solely upon the interpretation of physical signs. No symptom, or group of symptoms, is pathognomonic. And if the patient be seen late in the disease and there be no accurate preceding history, a diagnosis is frequently made which the autopsy completely disproves. The diagnosis with *galloping consumption*, meaning by this term, also, similar affections, though differently named by various authors, viz.: catarrhal phthisis, pneumonic phthisis, rapid consumption, etc., is the most interesting one to make both before and after death. During this latter form of disease we have during life the following succession of symptoms: a patient, who has been previously somewhat delicate and ailing, or else who has always enjoyed good health, is taken suddenly with an abundant hæmoptysis, and from that time appears to melt away visibly. Again we have instances where a patient has taken a severe cold, which is at first limited to the bronchial tubes, or else commences as an invasion of lobular, or croupous pneumonia. Such an one passes safely through the first stages of disease, but, instead of recuperating rapidly, remains feverish, prostrated, without appetite, and having frequent cough shortly followed by abundant muco-purulent sputa. Moist râles appear at the apices of the lungs,

there is deficient lung-expansion, and in a few weeks we have all the evidences of rapid and extensive breaking-down of pulmonary structure. If death results at this stage, as it ordinarily does, the autopsy reveals numerous cavities more or less extensive, disseminated throughout the lungs, but which are markedly distinctive and large in the upper lobes. Upon section of tissue in various places, we find a great deal of consolidated tissue of grayish or yellowish coloration. There is no crepitation upon pressure in these diseased portions of lung; they have lost all elasticity, and sink immediately when immersed in water. We may find a few crude tubercles disseminated throughout the tissues involved, but they are usually in small number relatively, and appear to be a secondary formation. The essential element in the disease brought to your attention is the degeneration of pneumonic inflammatory products, which have very rapidly become cheesy and softened here and there, where there are oftentimes also cavities which contain absolutely similar elements to those which have appeared during life in the expectorated substances (mucus, pus, broken-down epithelium, fat-globules, granular bodies, bits of connective tissue, and albuminoid fluid). Now, note well the clinical features of acute miliary tuberculosis! In this disease there is no abundant hæmoptysis in the beginning, but there is very rapid breathing without dyspnœa. Upon auscultation of the chest the sounds which characterize phthisis are not heard. There is no dulness more or less limited to the upper lobes, no pectoriloquy, nor gurgling respiration in the after-stages. What is discovered are the physical phenomena which belong, as already mentioned, to acute capillary bronchitis, *i. e.*, small, moist râles disseminated throughout the chest, followed by deficiency or absence of normal vesicular breathing, but without evidence of consolidation of lung, unless a pre-existing catarrhal process be present as a complication. After death, the lungs are found (as is beautifully shown in the specimen I hold in my hands) to be thickly studded everywhere with gray, glistening, and minute granular bodies which are nothing more nor less than miliary tubercles. They are, as a rule, uniformly disseminated throughout this portion of the air-passages, and only in exceptional cases conglomerated in larger numbers in particular spots.

According to Sir Thomas Watson, these miliary granulations are often the direct efficient cause of the concomitant inflammatory condition which they excite by their abundance and sudden pressure. He expresses himself in this connection as follows: * "Such, and not the reverse sequence, appears to me to be the *ordo rerum*. The tubercles are the cause of the inflammation, and not the inflammation the cause of the tubercles." This you perceive, gentlemen, is opposed to the German theory of the proper chronological order of the development of two juxtaposed and concomitant processes. It would appear, however, after the very latest information we have from French experimenters, to be in accordance with some of *their* most reliable conclusions (Charcot, Thaon). The duration of acute miliary tuberculosis is very short, only lasting a very few weeks. The prognosis has ordinarily been considered of the gravest, and its termination, until within a brief period, has been marked out as rapidly and almost, if not certainly, fatal. Such are the opinions recorded by Bennett,† Walshe,‡ Watson,* Trousseau,† and Flint.‡ A few German authors (Waller, Wunderlich, Burkart, etc.) having recognized at autopsies disseminated, chalky nodules in lungs which had evidently been the seat of miliary tuberculosis, and having shown that these calcareous deposits were transformed "gray granulations," have sustained the curability of this dread disease. Until the publication, however, of a little work by Dr. McCall Anderson, § entitled "Clinical Lectures on the Curability of Attacks of Tubercular Peritonitis and Acute Phthisis (Galloping Consumption)," I am not personally familiar with any author who has given the profession well-observed clinical studies which point graphically to the power drugs have in these cases, when made use of by a devoted and judicious clinical observer who puts proper faith in the armamentarium of his professional acquirements.

Dr. Anderson's treatment is about as follows: 1. The patient should take a pill every 4 hours, with the following composition: ‖ pulv. digitalis and pulv. quiniæ sulph., āā gr. j.; pulv. opii, gr. ½. 2. Iced flannel cloths, well wrung out and folded twice, are placed constantly over the abdomen until the body temperature is reduced to the normal point. 3. A subcutaneous injection of sulphate of atropine is given so often as the abundance of the perspiration requires it. The three recorded cases, which are fully described, certainly support the efficacy of this treatment. All three got well and had a rapid convalescence (two to three weeks). After the fever had subsided in great part, an emulsion of cod-liver oil was given for quite a period, and the ultimate results were all that one could wish for.

On page 54 of his little treatise, Dr. Anderson asks the question, "Under what disease were our patients laboring?" "I think no one," he goes on to say, "who has had experience of such cases, and who saw them while the complaint was progressing, could doubt they were suffering from acute phthisis. . . . . Of course I do not pretend to say whether they were cases of non-tubercular, or of tubercular phthisis, although the symptoms in the first and second cases seem to harmonize more closely with the descriptions of the latter form."

* Vol. II., 5th edition. London, 1871.
† Reynolds's System of Medicine, Vol. III.
‡ Practical Treatise on Diseases of the Lungs. 4th edition. London, 1871.

* Loc. cit.
† Clinical Medicine, Vol. III. London, 1870.
‡ Practice of Medicine. New York, 1876.
§ London, 1877.
‖ This pill was a favorite one of Niemeyer.

CLASS-ROOM LESSONS ON SYPHILIS,

GIVEN AT THE COLLEGE OF PHYSICIANS AND SURGEONS IN THE CITY OF NEW YORK.

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[For The Medical Record.]

Lesson III.

HEREDITARY TRANSMISSION OF SYPHILIS—PROGRESS OF THE SYPHILITIC INFECTION.

Gentlemen:—I will continue the study of the question of the transference of syphilis by first directing your attention to its *hereditary transmission.*

Heretofore, in considering the modes of transmission of syphilis, we have accepted the probable fact that this disease is communicated by contact of a diseased with a healthy human germinal cell. We have now to consider how diseased cells, in the adult male or female suffering with syphilis, may be brought in

contact with those of the embryo, or of the fœtal organism. It is claimed that the fœtus, through the natural processes of growth and development, may be built up from a syphilitic seminal animalcule (*spermatozoön*), furnished by the male, in conjunction with an ovum furnished by a healthy, or even by a syphilitic female, and may thus come to comparative maturity. Much clinical material has been adduced to prove this. On the other hand, it is claimed, with equal proof of a similar character, that this is *never* the case, but that the syphilitic influence is *always* furnished by the *female;* presumedly communicated to the embryo or fœtus through contact with the nutritive elements, furnished by a mother in whose organism the degraded cells or disease germs of syphilis are present.

Like most important questions in which syphilis is involved, a solution of the foregoing, based on clinical evidence alone, is most difficult. The best proof of this statement is, that on either side of all such questions the most experienced and competent observers are ranged in nearly equal force. To constitute *hereditary* syphilis, either the embryo or the fœtus must be infected. All infection during or subsequent to birth must be classed with one or other of the modes of transmission of syphilis previously considered.

If we accept the syphilitic influence to be, as previously claimed, a degraded formative cell, we may also accept, as a legitimate sequence, that, through this degradation, there is a loss of formative power—an inability to develop in any useful tissue.

The contagion of syphilis, as claimed, is always effected by contact of a *degraded* with a *healthy* germinal cell. In a strict sense, therefore, it is always localized. Cells thus degraded are practically emasculated; their capacity for usefulness is lost. Of necessity, then, *growth* of living tissue occurring must take place through the *normal* cell-elements, that is, in those which have escaped this degradation. It is thus plain that only a portion of the germinal material of a living organism can be affected by syphilis. Sufficient germinal material to carry on the processes of life and growth must escape, or growth would be at once arrested, and life would cease. The possibility of involving in the syphilitic dyscrasia so infinitesimal a fraction of a spermatic organism as would still enable it, in conjunction with the ovum, to play an efficient part in the growth and development of the human embryo, is scarcely conceivable. Especially difficult shall we find it to accept such a view, when we consider that, once in connection with the ovum, the syphilitic influence would be rapidly imparted to the germinal elements furnished by *it*. We may, then, consistently throw the great improbability of continued growth (or indeed of any growth), under such an unfavorable influence, into the scale with the clinical claims of those who *deny the possibility* of the embryo, or fœtus, being infected with syphilis by the spermatozoa. With this view of the subject, the onus of hereditary transmission of syphilis is necessarily thrown upon the MOTHER, under all, even under apparently contradictory, clinical circumstances. Hence, when an embryo or fœtus is the subject of syphilitic infection, we may conclude that it is the result of *contact* of its normal formative or germinal cells with cells degraded through the syphilitic influence furnished by the nutritive fluids of the MOTHER, either directly through the circulation, or through degraded cells from her organism gaining access to that of the embryo or fœtus by their amœboid power.

Hence, to make the syphilitic infection of an embryo or a fœtus possible, the organism of the MOTHER must *first* be infected with syphilis. The previous acquirement of syphilis by the MOTHER from the father, or through the secretion of a syphilitic lesion, or from the blood of one suffering from active syphilis (by direct or mediate contagion), is necessary to syphilitic infection of a fœtus or an embryo.

It is only during the active stages of syphilis (primary and secondary periods) that the contagious element of the different lesions of syphilis and of the blood is present; therefore, hereditary transmission of this disease is only possible during this time (*usually* from one to two years). The sequelæ of syphilis (tertiary and quaternary periods) contain no discovered elements of contagion. The most careful microscopical examinations have failed to discover in the products of *tertiary syphilis* (various forms of *gummata*, including eruptions) anything besides the débris of normal germinal elements. Repeated inoculations of these products have failed to disclose any contagious principle. *Without contagion there is no syphilis.* Hence, we may reasonably conclude that hereditary syphilis is only acquired during the active periods of the disease, and that, in order to effect syphilitic contamination of the embryo or fœtus, the female organism must first be infected.

With this view of the maternal influence in syphilitic infection of the fœtus or embryo, cases reported, claiming such infection to have occurred through the sole agency of the father suffering with syphilis (the mother, up to this time, free from the disease), must be classed either among those instances referred to where the characteristic features of the disease are absent, or so imperfecly developed as to have escaped detection.

The difficulty of instituting a thorough examination under circumstances where it is necessary to avoid suspicion of its object—the want of tact, care, and experience, in detecting obscure evidences of this disease, have, without doubt, too often led to the acceptance of syphilis acquired through the paternal influence, where, under other conditions, and in other hands, infection of the mother would have been recognized.

The following case will serve to indicate some of the various ways in which syphilis may be overlooked, and further, to show important variations in time and manner of development of syphilis from a similar source. Some three months since, Dr. W., a naval surgeon, consulted me in regard to a small nodule on the *frenum preputialis*. An abrasion was discovered, after a suspicious exposure, some four weeks previous. This healed at once, as if simple, and nothing farther was noticed until the nodule, about the size of a kernel of pearl-barley, was observed. Its surface was abraded, probably during a recent connection. Its scanty secretion was found under the microscope to consist chiefly of laminated epithelial scales. On account of the obesity of the patient, a satisfactory examination of the inguinal glands was impracticable. No enlargement could be felt. I advised excision of the neoplasm. This was done at once, and healing by first intention was complete within forty-eight hours.

A few days since (Dec. 15th), the Doctor called to say that the operation had evidently been efficacious in saving him from a general syphilitic infection; that he had positive proof of having himself communicated syphilis to a young lady the night previous to the excision. In her case an initial lesion followed in due time after the connection, accompanied by inguinal gland enlargement, and followed by general gland hyperplasias. She now had, in addition, a characteristic papular syphilide, and yet *he*

claimed to be absolutely free from the least evidence of syphilis.

A cursory examination appeared to confirm the Doctor's statement. This, however, appeared so improbable, that I at once instituted a more thorough examination, which resulted in the discovery, under a deep layer of adipose, of small but characteristic gland enlargements in connection with the initial lesion. The cicatrix on its former site was slightly indurated. Glands at a distance—epitrochlean and post-cervical regions perceptibly enlarged. Slight, but positive congestion of the fauces, and a narrow but characteristic *mucous patch* hidden behind the anterior pillar on either side. These proofs of syphilitic infection had escaped the anxious search and skill of the patient, also of a professional associate, who was a competent and experienced general surgeon.

Through evidence furnished by clinical cases, it has been claimed that syphilis once acquired is never fully eliminated from the system, but that it exists as a possible infecting agent after the stages which furnish *known* contagious elements are past. During more than twenty years of observation and especial interest in regard to this point, I had been unable to find a single undoubted instance, where a person in a known *tertiary* period of syphilis (and so demonstrated by the absence of the glandular enlargements characteristic of the active stages of the disease) had been the proven carrier of syphilis to a healthy person. I came to believe fully that persons who had passed successfully through the so-called *primary* and *secondary* periods, and so proven by complete absence of *primary* and *secondary hyperplasias* that treatment was no longer necessary—that such persons might, if desirable, even be permitted to marry, with the assurance that, through them, transmission of syphilis to wife or child was impossible. This doctrine I had taught and practised for a very long period, when a case came under my observation which, but for a mere chance, had unsettled me on this vital point forever. The important lesson which it enforced, viz., *to distrust the value of purely clinical evidence*, may be profitably transmitted by the brief extract from my notebook which follows:

"Mr. Q., a young lawyer, age twenty-five years, acquired a well-marked initial lesion of syphilis on the *glans penis*. His gland enlargements in the epitrochlean, cervical, and post-cervical regions were characteristic; his roseola escaped observation, but a classical papular syphilide appeared about the fourth month, and continued for several weeks. Ulcerations of the tonsils and *mucous patches* on the soft palate and inner surface of the cheeks followed, but yielded satisfactorily to treatment.

"The gentle but persistent use of mercury internally and by inunction had been pursued from the first and through a period of twelve months, occasionally combined with the iodide of potassium. At this time all glandular enlargements had disappeared, except a small one, the size of a pea, in the right *post-cervical* region. Treatment suspended for three months, when a thin diphtheritic patch appeared on the right side of the tongue, with slight induration. Treatment resumed—mercury, with iodide of potash. Patch on the tongue faded slowly out in about a month, but was replaced by another on the opposite side, which continued about the same time; *cervical gland* not perceptibly changed. A series of mercurial baths and a course of Zittman's decoction, covering nearly three months longer; gland now scarcely felt. Patient very anxious to marry, but was advised to wait a full year. The next six months passed without any new development. *Gland* very small, but still recognizable, when the patient, now in good general health, married on his own responsibility.

"One year after marriage the wife gave birth to a fine healthy looking boy. During the fifth month of lactation the wife had scrofulous abscess of the neck (inherited tendency), which alarmed the husband (fearing syphilis) exceedingly. She recovered under simple treatment and relief from nursing. Child healthy up to third year, when it died from tubercular meningitis following scarlet fever. No salient evidences of syphilitic taint. Fear that his old trouble had been in some way connected with his child's death made the husband very unhappy, and he frequently expressed the fear that he had or might yet contaminate his wife, to whom he was tenderly attached.

"In November, 1870, Mr. Q. complained of some swelling and soreness over the right tibia. A gummy tumor was found presenting, the size of a horse-chestnut. Explained the nature of it, and put him on a mild mercurial, with large doses of iodide of potassium, which resulted in its entire disappearance within a month. Both husband and wife continued healthy up to October, 1871, when one morning he called, in great distress, to say that his wife had some sores in her mouth that resembled those of his early syphilitic trouble. I did not hesitate to assure him that this was simply impossible; that his disease, if any trace of it remained, was beyond the fear of contagion. The spotless character and chaste deportment of his wife made me sure there could be no other danger, and I comforted him accordingly.

"What was my surprise, on seeing her, to find, not only several characteristic mucous patches in her mouth, but, on further examination, to discover four or five mucous tubercles; one on the inner border of the thigh, and the others on the right labium. I was forced to acknowledge to the wretched husband that he was right, and we could only conclude, contrary to all my assurance and belief, that his old taint had been the cause.

"Here was a dilemma. I could not suspect the wife. I could not accept the contagion from a source which stultified all my conclusions, teaching, and experience. I was wretched. Husband was wretched, but resigned, so only, if not necessary to her recovery, that I could keep the secret from his wife. She was serene—after a few weeks' medication and not unfrequent painful applications of caustic to the mucous tubercles, I thought she was *too serene*. I asked and received permission from the husband to tell his wife what her trouble was, if I thought it best. I changed my manner to her, and from being sympathetic and considerate, I became brusque and reserved. An explanation was finally demanded. I evaded the issue. After a little dexterous fencing, the source of her troubles was flatly demanded. Ignorance of my meaning was feigned.

"I explained the only causes of her disease, and said she had been married too long to suspect her husband. She promptly replied that he was 'as pure as the sun.' I then told her, if she would give me her confidence, I would protect her—if not, would lay the matter before her husband (who was not supposed to be aware of the nature of the disease). Then came tears, reproaches, and finally, in a tempest of womanly indignation, she bade me leave forever. I left disheartened and in disgrace, but before I was well on my way down-stairs I was recalled, and amid tears and sobs she confessed. A yachting excursion—an unexpected night at sea—exposure with an old lover; and all this about three months before. If this were

not sufficient, a letter subsequently received from him full of regret that he had discovered himself syphilitic, and inquiring if he had been so unfortunate as to have communicated the disease to her."

The subsequent progress of this instructive case was not peculiar. The lady made an apparently complete recovery in about a year. After another year she again became pregnant, was delivered of a healthy child, now living, but died of puerperal fever the third week after her confinement.

In carefully reviewing this history, it will be observed that, while it is no exception to the rule that tertiary lesions are not contagious, it will show how easily they may achieve the credit due to the active manifestations of syphilis.

Our next lesson will be regarding

THE PROGRESS OF THE SYPHILITIC INFECTION.

The term CONTAGION has been used to designate the act by which, through cell contact, the syphilitic influence is conveyed from a diseased to a healthy person.

By means of the influence thus communicated, proliferation and accumulation of degraded cells at the point of original contact (or inoculation) are claimed to result in the establishment of the initial lesion of syphilis, or *chancre*, in its various forms.

The course of the disease beyond this point is indicated, *a priori*, by the known fact* that all integumentary and cellular tissue are pervaded by lymph-spaces and channels, which lead, more or less directly, into lymphatic vessels; and that the lymph-current is constantly flowing *from* the tissues *toward* the lymphatic vessels and the glands in which they terminate.

Therefore a degraded germinal cell (syphilitic) introduced into the tissues (as by an inoculation), unless carried directly into the interior of a blood-vessel, must (itself, or its vitiated descendants) of necessity sooner or later be carried along by the lymph-current to and into the gland of connection.† All clinical observations confirm this view. First, in the discovery of indurate lymphatic vessels, leading from the point of inoculation to the gland in connection. Second, by the subsequent enlargement and induration of such glands. Third, their acceptance as a necessary sequence of the inoculation, and as positive proof of the nature of the disease.

The process through which the syphilitic influence thus gradually advances, and finally invades the general system, is termed the process of SYPHILITIC INFECTION.

The progress of the *syphilitic infection*, from the date of its *genesis* at the point of inoculation to its characteristic appearance in the glands nearest the point of inoculation (the glands of connection), varies in different persons, from causes not thoroughly settled, but which are indicated in note following Lesson II.

The degraded cell-elements, then, effecting an entrance into the substance of the lymphatic gland, are here detained by the peculiarities of the gland structure, and perhaps by other inhibitory influences (see Physiology of Syphilitic Infection) for a period varying in different instances from twenty to sixty days (see Physiology of Syphilitic Infection). This period is recognized by all clinical observers, and has been described as the second incubation of syphilis. It is certain, however, that no syphilitic influence has yet been discovered in the general blood-current during this period, and there is sufficient reason to suppose that the diseased elements are confined to the glands of connection, and those intervening more deeply between these and the thoracic duct.*

The glands of connection become gradually enlarged, apparently through the proliferation and accumulation of cells in their interior.

When the initial lesion is located upon the genital apparatus, on the glans or on the body of the penis in the male, or on the labiæ or within the vulva in the female, the lymphatic glands of the groin become enlarged, so that, as a rule, several may be distinctly recognized by the touch, varying from the size of a small pea to that of a large bean. Sometimes these enlargements are apparently confined to the side corresponding with the initial lesion—sometimes to the opposite side; usually, however, the glands of both sides are more or less enlarged. Hard, nearly or quite painless, and movable, their *gradual accession within two or three weeks, after a suspicious venereal exposure*, is strongly indicative of syphilitic origin, without regard to the character of the *local lesion*. If this is present, and indurated, the syphilitic character of the trouble is no longer doubtful. It must, however, be borne in mind that glands enlarged through the influence of scrofula cannot be with certainty distinguished from those of syphilitic origin.

They are found in the same locations, and though usually less positively indurated, are still sufficiently so to prevent certain diagnosis. When the initial lesion is on the lips, or in the mouth, the submaxillary gland is affected. Wherever situated, it is always the *glands of connection* (*i.e.*, those nearest to the seat of inoculation) which are involved. Such enlargements are called syphilitic *buboes*.

The complete freedom from true inflammatory action, which has been shown to characterize the induration of the initial lesion of syphilis, and the lymphatic vessels in connection with it, is equally characteristic of the enlargement and induration of the associated lymphatic glands. When attaining sufficient size to interfere with freedom of motion of a part, or where, from any cause, they are subjected to undue pressure, a degree of tenderness may result. From the same cause, inflammation, and even suppuration, may supervene in highly scrofulous subjects. Such accidents, however, are exceptional, and do not materially lessen the diagnostic value which attaches to *recent and painless* enlargement of lymphatic glands.

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* Stricker's "Human and Comparative Histology," Sydenham ed., vol. i., pp. 307 *et sequitur*.

† NOTE.—"The wandering red blood-globules, mostly again return into the circulation through the lymphatics. The wandering white blood-corpuscles probably return into the circulation in the same way."—*Wagner's Manual of General Pathology*, Am. ed., p. 151.

* NOTE.—A similar inhibitory influence exerted by the lymphatic glands in cancerous diseases is cited by Virchow in his "Cellular Pathology," Am. ed., p. 221, with the following explanation: "We can account for this by no other supposition than that the gland collects the hurtful ingredients absorbed from the breast, and thereby for a time affords protection to the body."

It has been suggested that if the disease were really so localized, prompt *enucleation* of the initial lesion and of the affected glands might prevent general infection. It must be remembered that the infective cells, each of which is potent to act as a starting-point for systemic infection, are not only present in untold numbers at the point of inoculation, but that (as shown by Biesiadecki's microscopic researches) the walls of the intervening lymphatic vessels are lined if not packed with them. Hence, any proposed surgical extirpation of the disease must imply the entire removal of all the lymphatic connections of the initial lesion and the glands of connection—a procedure not only without sufficient promise of benefit at this stage of the infection, but even at the earliest date after inoculation, the necessary ignorance as to the degree of implication of the lymph-spaces and vessels in the vicinity of the inoculation would, in all probability, render all such means of preventing the spread of the infective processes of uncertain value.

Early excision of the initial lesion may, however, be found to modify the intensity of the subsequent general infection. My own experience in nine cases of excision, during the past eight years, would warrant this inference.

The progress of the syphilitic infection, which has been steady and persistent from the moment of inoculation to the engagement of the nearest lymphatic glands, appears now to be arrested. Gradual increase in their size and density alone indicates the activity of the infective process, until, after a period (varying in different instances from twenty to sixty days), evidences of constitutional infection may appear.

Access from the surface to the general blood-current, through the lymphatic spaces and vessels, *necessitates* passage, first, through the gland in immediate connection; second, through any other glands or vessels which may intervene between them and the great lymph-channels; passage from thence into the general blood-mass is immediate.

Thus the delay between appreciable implication of the glands of connection and earliest evidences of constitutional syphilis is explained in accordance with known histological and physiological laws. Hence, it is only *after* a time sufficient for the passage of the diseased elements through the natural barriers, the lymphatic glands, to the general blood-channels, that systemic infection can take place.

With this view of the *progress of the syphilitic infection*, the interval between the date of inoculation and the introduction of the diseased elements into the general circulation may be appropriately termed the INITIATORY PERIOD OF SYPHILIS.

Progress of Medical Science.

DIFFUSION OF CARCINOMA BY THE NERVES.—Dr. Colmiatti, who has already published important articles on the pathological histology of the nerves, presents in the *Revista Clinica di Bologna*, an interesting case illustrating his theory of the diffusion of carcinoma by the nerves.

The patient was a man forty years of age, who had previously enjoyed good health, but recently had been attacked with neuralgia of the left cheek, corresponding to the inferior molars. An examination showed that there was a considerable tumor on the inner side of the gum. This tumor, the size of a hen's egg, was removed, and at the same time disarticulation and resection of the jaw as far as the left canine tooth was practised. Though the wound healed readily, the severe neuralgia continued.

The tumor proved to be a carcinoma. It involved the inferior dental nerve, which was followed for more than two centimeters, and into its canal in the bone. There was connected with the tumor and the bone an enlarged and indurated lymphatic gland, belonging to the suprahyoid region. This was also removed. The posterior portion of the nerve, when removed from the canal, was found considerably enlarged.

According to the theories of Robin and Key and Retzius, the nerves contain two species of connective tissue: the *epi-neurium*, and the *peri-neurium*, with its appendix the *endo-neurium*. The epi-neurium connects the bundles which form all nervous trunks, and appears to envelop them; the peri-neurium and endo-neurium form integral parts of each bundle. Their connective tissue consists of small membranes, within which are the so-called peri- and endo-nervous lymphatic spaces, but which have nothing to do with the common lymphatic system. These small membranes which, like the nerve-bundles, maintain a cylindrical form, are arranged in a circular manner at the periphery of the bundles, and are connected and held together from place to place by membranous lamellæ. Hence these peri-nervous lymphatic spaces are multiple and always communicate one with another. The membranes constituting the endo-neurium, which arises from the peri-neurium, pass around each nerve-fibre in such a manner as to form circumscribed endo-nervous lymphatic spaces, which are also continuations of the peri-nervous spaces. The ultimate arrangement of the above-mentioned membrane is such, therefore, that every fibre is suspended in a lymphatic space. In the case mentioned we have to take into consideration the lymphatic current which flows in the special canals of the peri-neurium and the endo-neurium, a current which is in direct communication with the spinal and cerebral subarachnoid spaces, and, by means of these, with the ventricles of the brain, through which the carcinoma cells may pass indefinitely.

The author states that he saw in the section of the dental nerve an abundant infiltration of the carcinoma cells, which were diffused through the peri-nervous and endo-nervous spaces. He also states that this is the second case in which he has found the carcinoma diffused through the inferior dental nerve. The diffusion of the disease was by the nerve solely.—*Lo Sperimentale*, March, 1878.

THE USE OF ETHERIZED COD-LIVER OIL IN PHTHISIS.—At a meeting of the Therapeutical Society of New York, held April 12th, a preliminary report was offered on the combined use of ether and oil. In 1868 Dr. Balthazar Foster, of London, introduced this subject to the profession. Basing the theory of the use of ether upon the experiments of Claude Bernard, who showed that ether increases very markedly the secretion from the pancreas, he sought to apply these facts in the treatment of phthisis. The known defective assimilation of fats, which is a leading condition in the dyspepsia of phthisis, depends upon the feeble action of the pancreas; consequently any agent that increases the pancreatic secretion is a valuable agent in the treatment of the disease. Bernard also found that ether promoted absorption.

The report covers thirty-one cases in which ether was given in connection with cod-liver oil. In twenty-six of them the oil was well borne, while in five it was not. In the twenty-six cases in which the oil with the ether was well borne it is noted in twenty-four that either pure oil or an emulsion of oil had been tried and had disagreed. In one case plain oil was found to agree better than the mixture with ether, and in another case the etherized oil did not answer so well as an emulsion with the hypophosphites. In the majority of the cases the oil and ether were taken together; in three it could not be borne with the oil, but was taken satisfactorily afterwards—in fifteen to thirty minutes. A source of fallacy was noted by the committee in making their report upon etherized oil in comparison with ordinary oil. It was this: much of the latter gets rancid, and so causes nausea and perhaps diarrhœa. Ether prevents rancidification, so that it was difficult to know how far the good effects of the ether were due to this property alone. The brief limit of time over which the observations extended did not allow of any conclusion as to the comparative advantage of this particular preparation over others in arresting the progress of the disease.

The dose of the oil was from two drachms to half an ounce with ten to twenty minims of ether, three times a day. Both oil and ether were given in various combinations, so as to be as palatable as possible. —*N. Y. Med. Journal*, July, 1878.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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THE PRELIMINARY MEDICAL COURSE AT JOHNS HOPKINS.

THE lately published prospectus of the preliminary medical course at the Johns Hopkins University, which is to be initiated towards the end of the coming September, is quite a commentary upon the present prevalent mode of teaching medicine. If the above-mentioned seat of learning at Baltimore has gained a reputation for any one thing in particular at this early stage in its growth, it is for doing thoroughly whatever it undertakes. The excellence and completeness of its academical and scientific courses are already matters of history. The trustees of the medical school and hospital have certainly not fallen behind their brother managers in setting up and promulgating a high and thorough standard of education preliminary to the study of medicine.

The proposed preliminary course is to be given, as above stated, late in September of this year. The object of this course, according to the prospectus, is to give the student a "liberal education, but one rather scientific than literary, and including a thorough knowledge of the structure and functions of the human body in health." The student will be prepared at the completion of this course to enter upon the study of the regular branches of medicine. The preliminary course will extend over three years, but students who pass a successful examination upon the studies prescribed for the first year will be allowed to enter at once upon the studies of the second year. Students matriculating in the above course, who are not already students of the university, will be obliged to pass an examination in elementary mathematics, algebra, and geometry, and to render translations from Cæsar and the Æneid. Excellency in spelling and conformity to the rules of English grammar are to be a *sine qua non* of success in the examination. The course for the first year consists of French, German, and drawing (free-hand), with lectures and laboratory work in experimental physics, elementary mechanics, and chemistry. The curriculum for the second year includes chemistry, general biology, an elementary course in comparative anatomy and zoölogy with dissections, an elementary course in physiology and histology with laboratory work, human osteology and the anatomy of the ligaments and joints, and logic. The studies of the third year are to be human anatomy, an advanced course in physiology and histology, the elements of embryology, and psychology. An examination will be held at the end of each year upon the studies pursued during that year. Graduation in the above-mentioned branches will entitle the student to entrance upon the studies of the medical school without further examination. The preliminary course, however, is "*designed to meet the requirements of students who wish to obtain a sound scientific basis for their professional studies, whatever medical school they may afterwards select.*" A formal diploma is to be granted to the graduate of the preliminary course. Though still *sub judice*, it is proposed that this diploma shall be that of Bachelor of Medicine.

To go somewhat more into details in explanation of the several special courses, the course in physics, extending through the first year, will consist of weekly recitations, lectures, and laboratory exercises. A morning of each week is to be set apart for laboratory work. This work has two ends in view: 1st, to give the student a clearer insight into the subjects studied, serving as a test of progress to both teacher and learner; and 2d, to enable him to acquire a familiarity with the use of apparatus. The manner of conducting the exercise will be as follows: with the enunciation of a problem, each student will receive the apparatus necessary for its solution, and will be required to make the series of observations which, with their discussion and reduction, he is to submit to his instructor. These results will then be criticised and returned. Those who are aiming at the profession of medicine will thus grow familiar with physical instruments and methods which are of prime importance in physiological researches—for example, thermometry, the laws governing the phenomena of electricity, of light, etc.

In the course on chemistry both organic and inorganic chemistry will be treated as thoroughly as possible; an examination upon the matter considered will be held after each two lectures. The principal work will be done in the laboratory. A knowledge of the general principles of chemistry must be had before entering the chemical laboratory. Regarding the nature of the chemical course in the laboratory, the prospectus says: "At first the student will have to make himself acquainted with the action of the various classes of substances upon each other, by actual observation at the laboratory desk; and his knowledge will be constantly tested by means of appropriate prob-

lems given him for solution. After completing this course, he will be enabled further to test his acquirements by taking up a course of qualitative and quantitative analysis. At intervals during the time he is engaged in this work, he will be required to prepare some chemical compounds in a pure state, so that his ideas concerning chemical action may become enlarged, and his knowledge of the special properties of the different classes of compounds more definite and detailed."

The course in biology is to consist of (*a*), *general biology*, preliminary to the study of anatomy and physiology. The student will be taught how to dissect, and the use of the microscope, "and will learn, in a general way, the forms assumed and the actions performed by living things." With this end in view, certain types, such as the amœba, vibrio, etc., will be minutely studied. Under this head also will come the consideration of homology and analogy. At the termination of the above course, the subject (*b*) of *animal morphology* will be considered. The characters and affinities of each of the main groups of the animal kingdom will be systematically investigated. Then will come (*c*) animal physiology and histology, with special reference to the human body, viz., the nutritive medium, the supporting tissues and organs, the contractile tissues, the nervous tissues, etc., etc. In connection with this course students will be taught the preparation of specimens for microscopical examination. They will also be required to perform the simpler physiological experiments for themselves (*d*), *human osteology*, including the form, development, and general arrangement of the skeleton. The third year will be devoted to (*e*), *human anatomy*, with lectures and demonstrations on the "anatomy of the muscular, vascular, nervous, and other systems of the body; and on the regional anatomy of certain important parts." Later in the year comes (*f*), *an advanced course in physiology and histology*, consisting of: (1), the physiology of the senses; (2), the physiology and histology of the nerve-centres; (3), a course of six lectures upon the chemistry of nutrition; (4), a course of lectures upon histogenesis (intended mainly as a foundation for the study of pathological anatomy). The year ends, finally, with (*g*), *the elements of embryology*.

The expense of tuition will amount to $80 per annum, together with small charges for laboratory material. Free scholarships are provided for those young men from Virginia, Maryland, and South Carolina who need assistance. The cost of living in the city of Baltimore is in the neighborhood of $35 per month, including lights, fuel, room, etc. The term begins on the 24th of September, 1878, and ends on the following June. There are short vacations at Christmas and Easter. The instruction in chemistry will be given by Professor Ira Remsen, and that in biology by Professor Newell Martin and his assistant, Dr. William K. Brooks.

We have given the above somewhat extended notice of this preliminary medical course for the purpose of calling attention to its exceeding usefulness and great thoroughness. There is a very generally expressed demand nowadays for an accurate knowledge of anatomy, physiology, histology, and chemistry on the part of the student of medicine. The great defect of our past systems of medical education has lain in the fact that the practical branches of medicine have been pushed to the exclusion of the theoretical departments; the superstructure developed, and the groundwork neglected.

We hope that the wise example afforded by the trustees of the Johns Hopkins Medical College will be speedily followed by our other great medical schools —Bellevue, Harvard, and the University of Pennsylvania. Let them establish preliminary courses of medical education, and require of their matriculates the knowledge which the Johns Hopkins School will strive to inculcate. We look with peculiar approbation upon the institution of the degree of B.M. as a requisite for the regular matriculate in medicine. The nearer our medical education approaches to the European models in this direction, the freer shall we be from quackery and humbug, and the better able to occupy our proper positions.

THE NATIONAL QUARANTINE REPORTS.

THE manner in which the provisions of the National Quarantine Act are being carried out by the Supervising Surgeon-General of the Marine Hospital Department is not only very satisfactory for the present, but very encouraging for the future. As yet the system by which the reports are gathered, not only from different parts of the United States, but from various foreign countries, is so far from being developed that it may be said to be in its incipiency. Still, any one who has read the weekly reports as published in this journal can hardly be too sanguine as to the elaboration of the idea which they embody. The beginning is an excellent one, and foreshadows a usefulness as a bureau equal to that of the Signal Service. They are both founded on a somewhat similar plan, and what one has accomplished in the way of systematizing weather reports can be done by the other in heralding the march of epidemics, and in furnishing trustworthy accounts of the sanitary condition of different localities. We have no doubt that experience in gathering and disseminating the required information will rapidly develop the possibilities for even increased usefulness of the bureau, and place the profession and the country under renewed obligations to the author of the law, who is now its efficient administrator.

JOURNAL PRESCRIBING.

WE are so constantly appealed to by outsiders for medical advice through the columns of this journal, that in the way of a general answer we wish to make

a few remarks. We do not believe in dispensing advice by wholesale, as every case must be treated on its individual merits. No patient can be intelligently prescribed for unless he can be actually seen, and no one is better qualified to act under the circumstances than some trustworthy and well-educated local practitioner. To the latter we are perfectly satisfied to leave all so-called difficult cases, with the firmest conviction that the best will be done for them that is possible under the circumstances. Hence those who persist in asking for medical advice through our columns, do so at the expense of both time and hope.

Reviews and Notices of Books.

ANTAGONISM OF ALCOHOL AND DIPHTHERIA. By E. N. CHAPMAN, A.M., M.D., formerly Professor of Materia Medica and Therapeutics, and Clinical Midwifery, etc.; recently Professor of Obstetrics and the Diseases of Women and Children, in the Long Island College Hospital. 16mo, pp. 98.

THIS is a work which every physician should peruse carefully. Although we have had diphtheria discussed extensively of late, a perfect horde of remedies recommended, and bacteria treated of *ad nauseam*, the investigations of those who hold that the disease is *primarily local*, in spite of their elaborateness, fail to evolve means for the prevention and lessening of its mortality. The *local* theory has fairly turned the heads of the majority of the profession, so much so that when "general blood disease" is mentioned the *téméraire* is almost looked upon with scorn. But there are some wise and bold men who dare to treat their patients upon the theory of *primary general infection*, and Dr. Chapman is one of these. But Dr. C. not only employs the supportive treatment in general, but relies upon alcohol as the *antidote* to diphtheritic poison, as the stimulant and *force-conserving* agent *par excellence* in this disease. In this he is supported by M. Sanné, who, however, looks upon alcohol as "*le plus sûr de tous les antiseptiques donnés à l'intérieur.*" Dr. C.'s views were first published in 1863 (*Boston Medical and Surgical Journal*, Feb. 5th), but unfortunately did not receive the attention they deserved from the profession.

As set forth in that paper, they were briefly these: 1. That diphtheria is a blood disease, tending to *rapidly destroy the vitality of that fluid.* 2. That the exudation is a local manifestation of a general dyscrasia. 3. That the fever is symptomatic. 4. That alcohol, promptly and *liberally* given, is an *antidote* to the poison of diphtheria, a febrifuge and sedative, and a prophylactic as well as a curative agent. 5. That it should be given as early as possible, and during even the so-called inflammatory stage. 6. The *cause* of the disease is a state of the air that impairs the vitality of the blood, and not an animal or vegetable poison.

A reiteration of these views, with clinical data to support them, was made before the Kings County Medical Society, Oct., 1877, but with very little or no effect. The Doctor lays especial stress upon giving alcohol early, before the blood becomes so devitalized as to be incapable of regeneration. He regards it as *the* remedy for complications. Out of 125 cases, he only lost one. He records quite a number of clinical cases, lays down rules for the use of alcohol in cure and prevention, and gives some very interesting facts on lime as a food-assimilator, as well as practical hints on drainage, in this little book.

The experiments and conclusions of Binz, Dupré, Anstie, and others confirm the clinical data of Todd and Graves, and the later ones of Chapman. We feel the profession at large should heed these facts, individually test this most potent remedy, and not allow its prejudices or preconceived ideas of the nature of the poison of diphtheria to interfere with an honest attempt to lessen the mortality of this frightful malady.

AN ESSAY ON RECTAL MEDICATION. By WILLIAM BODENHAMER, A.M., M.D. 3 Illustrations; pp. 58. William Wood & Co., New York, 1878.

THIS is another of those handsomely printed and bound, though superfluous volumes, which are issued these later days, a credit to the publishers, but of little real need to the profession. Students or the profession are not in want of a special treatise upon the manner of giving enemata, since most works on medicine and surgery do this. Nor is an historical sketch of enemata, or mention of the various channels through which medicines can be introduced into the human system, required. These considerations, however, occupy the greater space of this work. Dr. B. rather magnifies the matter when he claims (p. 17) the giving of an enema to be an operation of "much delicacy, and one which may be attended by danger, if not guarded by proper precautions." However, being such a *delicate* operation, he refers the reader to his work on "The Physical Exploration of the Rectum", for the directions for introducing the recto-colonic tube, thereby entailing the expense of a new purchase, when full directions should be found in the present work itself. The author places too little stress upon the efficacy of suppositories, which, in our hands, have the first place in the treatment of enteric inflammations. Rectal absorption and recto-colonic products may be found in all standard works on physiology, and scarcely need reproduction, although noted *in extenso* in the work under consideration. Dr. B. seems wholly oblivious to the existence and function of the great sympathetic system when he says, on page 28: ". . . these nerves [of the cerebro-spinal axis] perform other functions more vital than those merely of supplying volition and of bestowing sensibility." Hypodermic alimentation is called barbarous (p. 32). We do not anticipate general concurrence with the statement that, as a general rule, one-third the quantity required by the stomach will act more powerfully *per rectum*. In considerable experience with suppositories and enemata we have always found *at least double* the quantity of morphia, opium, etc., is required *per rectum*. Enemata of quinia and balsam of copaiba as a *regular* treatment of malarial fevers and gonorrhœa, respectively, are not likely to become "the rage" at present. The same may be said of tr. iodini enemata for leucorrhœa (!). Savory & Moore's gelatine disks seem a little over-nice and expensive for enemata (p. 37). A journal article giving a résumé of the author's views, as contained in Section V. of this book, would have sufficed all practical and theoretical needs. Since the author is quite careful with his Latin, let us suggest his perusal of magnesia (for magnesiæ), p. 21; aquos (for aquosi), p. 34; chloral hydrate (for chlorali hydratis), and vaccina (for vaccinæ), p. 35; ætherea (for æthereæ), and vitellum (for vitelli), p. 36. M. Mialhe is spelled *Mailhe*.

PRACTICAL CHEMISTRY FOR MEDICAL STUDENTS. By M. M. PATTISON MUIR, F.R.S.E., Prælector in Chemistry, Gonville and Caius College, Cambridge. 18mo, pp. 56. London: Macmillan & Co., 1878.

Is intended to arrange facts and methods in inorganic qualitative analysis so the student may *thoroughly* learn, during his necessarily limited course at college, what he *must* acquire in order to obtain his diploma. Pages 7 to 18 (inclusive) give general explanations of tests and the manner of making them. Metals and non-metallic radicles are arranged according to *groups*, in this way impressing the student with a more complete understanding of the various tests than any other arrangement could possibly do. Both the dry and wet tests are given, nicely arranged as tables under the head of each metal, salt, or acid. The last table in the book gives tests for brucia, morphia, strychnia and quinia, and a full index closes this valuable little volume.

We especially commend it to students as a valuable *résumé* of the analysis of organic acids and inorganic substances which are used in medicine, especially serviceable for laboratory use and reference.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 12, 1878.

DR. J. C. PETERS IN THE CHAIR.

CASE OF TYPHOID FEVER—SUDDEN DEATH AT END OF FIRST OR BEGINNING OF SECOND WEEK — POST-MORTEM REVELATIONS.

DR. B. ROBINSON presented a specimen of intestine, with the following history: C. C., æt. 18, piano-maker, was admitted to the Penitentiary Hospital on Blackwell's Island, May 7, 1878. For a week or more patient had suffered from a feeling of general prostration, headache, chilly sensations, and loss of appetite. Responses to questions were obtained with difficulty, on account of mental obtuseness. During the night aberration of intelligence took the form of incoherent muttering, and the patient made several attempts to get out of bed and walk.

On May 9th, two lenticular rose spots were discovered over the upper portion of abdomen. These had disappeared by the following morning, but were replaced, on May 11th, by several other spots of like appearance. The abdomen was swollen and tympanitic, and upon moderate pressure of the right iliac fossa it was found tender, and gurglings were produced. Stupidity and prostration augmented; no albumen in urine; no cough; respirations slightly accelerated; pulse 112, markedly discrotic in the right wrist, scarcely perceptible in the left. Temperature, A.M., 101¼° F.; P.M., 102¼° F. Some watery diarrhœa; muscular twitchings of the hands and forearms. R. Quinine, digitalis and moderate quantities of stimulants were ordered.

On May 10th, 11th and 12th the patient's pulse continued fluttering, and at times there were notable intermissions. The temperature remained about the same; there was complete prostration. On May 13th, the heart ceased to beat at an early hour.

Autopsy by Dr. E. A. Maxwell, twelve hours after death, revealed the following conditions of organs: *Brain* and *lungs* deeply congested. *Heart:* right ventricle collapsed, flattened, and indented on outer surface; left ventricle firm. On opening, cavities empty; muscular walls of normal thickness, moderately firm, reddish yellow color and have shining, waxy lustre. Microscopical examination (by myself) showed moderate granular degeneration of muscular fibres in certain places; in others the striæ, though pale, are still perfectly visible; *no vitreous* change anywhere. *Mesenteric glands* enlarged, and on section some were found red, mottled with yellowish streaks and hemorrhagic points.

Spleen somewhat enlarged and softened.

Kidneys congested and slightly increased in size.

Intestines: moderate swelling of agminated and solitary glands of lower portion of small intestine. Increase in size of the glands is most marked in lower two or three yards of small intestine, decreasing as you go upward, while in upper portion of small intestine there is scarcely appreciable swelling. The second Peyer's patch above the ileo-cæcal valve shows two or three ulcerated glandules. Cæcum and ascending colon show a few enlarged solitary glands.

Muscles, voluntary, are of deep reddish color, dry.

Neither height of fever, apparent degeneration of heart-fibre, nor sudden cerebral anæmia, are evidently accountable for this death. What is the explanation of it? The termination is additionally interesting, owing to the following statement of Liebermeister: "Death rarely happens as early as the second week in uncomplicated cases, and I do not remember ever to have observed a case of death in the first week of typhoid fever." Towards the end of the third, or in the beginning of the fourth week, deaths from typhoid fever are, as we know, *not* infrequent.

DR. PUTNAM-JACOBI asked how much digitalis had been administered.

DR. ROBINSON stated that no special directions had been given to the house-physician, but his (Dr. B.'s) practice was to prescribe the drug in small doses.

DR. PUTNAM-JACOBI remarked that the question was a pertinent one because of the difference of opinion in regard to the advisability of giving digitalis to such patients. Some authors claimed that in certain doses it acted as a heart-tonic, while others believed that it caused heart-paralysis.

DR. LOOMIS remarked that the intestines did not present the appearances of being in the second week of typhoid fever.

DR. ROBINSON thought that, inasmuch as some of the patches were ulcerated, a week must certainly have elapsed.

EPITHELIOMA OF THE PENIS.

DR. POST exhibited an epithelioma of the penis, removed by amputation of that organ from a man aged sixty years. The disease existed for something more than a year, and the curious fact connected with it was, that the patient's father had suffered from it in the same locality. The growth involved the glans penis, was surrounded by a phimotic prepuce, and the orifice of the urethra was so compressed that urine was passed with difficulty. The operation was performed two months before by bringing the glans forward and removing it with one sweep of the catling. The flaps of integument were secured by sutures to the urethra. The case made a good recovery.

REMOVAL OF CANCER OF BREAST, AND WOUND OF AXILLARY VEIN.

DR. POST also exhibited a large cancerous breast from a Swedish woman, aged forty-six years. There was an interesting feature connected with this case,

which was not detected until the operation, and that was an infiltration of both pectoral muscles, and an involvement of the glands of the axilla. It was necessary to remove the greater portion of the great pectoral, and to divide and remove a small part of the lesser pectoral. In attempting to enucleate an extension of the disease high up in the axilla, the axillary vein was punctured. The vessel was promptly secured by a double ligature. The axillary artery was exposed in the dissection to the extent of two or three inches. The growth was found to extend so deeply that it was not considered prudent to follow it any farther. The patient bore the operation very well.

Dr. Mason, in connection with the case of cancer of the penis, stated that he had performed a similar operation nearly two years ago, and that there had been no return of the disease.

Dr. Weir stated that the immunity from a return of cancer of the penis was considered to be about three and a half years. In regard to Dr. Post's second case, he said he had a somewhat similar experience in wounding the vein. He, however, secured the bleeding point with a lateral suture.

Dr. Mason also in this connection referred to a wound of the axillary vein in which he also applied the lateral suture. In reference to the extension of the disease in the axilla, he related the case of a woman who came from the country in the morning and was operated upon in the afternoon. It was found impossible to enucleate the mass from the great vessels, and it was simply tied with a string ligature and the stump was left. That patient died of pyæmia six days afterwards.

Dr. Post stated that his son, Prof. Geo. E. Post, of Beirût, Syria, had in the course of a removal of a tumor of the neck divided the primitive carotid, jugular vein, pneumogastric nerve, great sympathetic, and several branches of the cervical plexus. The patient did not, however, die on the table, but after a few weeks returned to her home. The disease returned six months afterwards. Dr. Post also stated that he once removed a portion of the femoral vein and artery with a tumor of the thigh.

Dr. Briddon stated that, in the removal of a large myxomatous tumor of the chest, he had completely divided the axillary vein. The hemorrhage was arrested without any trouble.

Dr. Satterthwaite asked if any of the glands above the axilla, in Dr. Post's case, were involved.

Dr. Post had not noticed any.

Dr. Satterthwaite remarked that the case presented itself to him at the dispensary, when he noticed that a chain of ganglia above the clavicle were involved.

LOCAL PERITONITIS OF STOMACH—MULTIPLE ABSCESSES OF THE LIVER—PYÆMIA.

Dr. Loomis presented the stomach, intestine, mesentery and liver taken from a patient æt. 32 years, who was admitted into Mount Sinai Hospital, April 12th. He stated that up to ten days before his admission he had always been well, when he was seized with a pain in the epigastrium, preceded by chill and followed by fever. These symptoms lasted for three or four days. He then recovered sufficiently to attend to his business. On the night of April 12th he was again seized with the pain when he entered the hospital. His pulse was then 84, and his temperature 103.5° F. The next day, when Dr. L. saw him, he complained of most intense pain midway between the xiphoid cartilage and umbilicus. This pain was not increased on pressure, but the abdominal muscles in that situation were so rigid that it was impossible to determine the condition of any of the underlying viscera. The lower portion of the abdominal walls were naturally yielding. His countenance had an anxious expression, and he had an emaciated appearance. There was nausea and occasional vomiting. Up to April 19th his temperature ranged from 103° to 104°. During this time he was treated with morphine to relieve the pain, and quinine for the fever. The temperature was, however, not controlled. His pulse was regular and of good character. It was looked upon as a case of malarial fever, with a possibility of the addition of peritonitis over the region of the stomach. The pulse was, however, against the peritonitis, as was also the temperature. On the 19th his temperature fell without apparent cause to 100°, and remained in that neighborhood (not exceeding 102°) until May 6th. His pulse ranged about 84. There was no change in the general symptoms, no excessive tympanitis, but the rigidity in the upper portion of the abdominal walls remained; besides, there were no evidences that pressure increased his pain, and the diagnosis was accordingly held in abeyance. At no time during his stay in the hospital did the patient have chills. When under the influence of morphine his surface was moist. He gradually emaciated, and died from asthenia.

At the autopsy all the organs, save those presented to the Society, were found healthy. The lesser curvature of the stomach was the seat of limited peritonitis, and was firmly adherent. Corresponding to this situation, on the inner surface and underneath the mucous membrane, were small abscesses. The small intestines were bound together by adhesions, and throughout the mesentery there were small abscesses. Some of the vessels in the neighborhood were plugged. The liver contained multiple abscesses, and in some places there were infarctions.

In conclusion, he remarked that the absence of chill, low temperature for the first week, and low pulse without sweating, would hardly lead to the suspicion of multiple abscesses of liver, with peritonitis and pyæmia, and the case came to the autopsy without a diagnosis.

EXTRA-CAPSULAR FRACTURE.

Dr. Stimson presented a specimen of extra-capsular fracture of the femur, which occurred in a woman eighty-two years of age. There was a great deal of swelling of the part, a great deal of ecchymosis, and the shortening was about one inch. He considered the case as rare, occurring in a person of the age mentioned.

Dr. Post remarked that intra-capsular fracture scarcely ever occurred under fifty years of age, while extra capsular fractures might occur at almost any age. In regard to the amount of shortening in these cases, he stated that when there was more than an inch it was likely to be extra-capsular fracture; if less than an inch, intra-capsular.

OSTEO-SARCOMA OF KNEE-JOINT—AMPUTATION OF THIGH.

Dr. Briddon presented a specimen of osteo-sarcoma of knee-joint, for which he had performed amputation, and read the following history from notes furnished by Dr. Alberto Lacayo, house-surgeon:

John Kittrick, æt. 17, New York. Admitted to Presbyterian Hospital, service of Dr. Briddon, April 5, 1878. Patient's mother suffered from rheumatism of a chronic character; other members of the family are healthy. During childhood he had scarlatina. When he was eight years old he had an attack of articular

rheumatism for two months. Six months ago he had another attack for three months. Ten weeks ago he was taken with pain in the knee, the parts soon becoming swollen.

On admission, patient an anæmic, emaciated looking subject. Appetite good. Right knee is red, swollen, and very tender to pressure. The appearance of the parts involved is peculiar: the ends of the bones entering into the conformation of the joints presents a globular form such as is met with in articular ostitis. The swelling does not apparently extend higher than the limit of the capsule beneath the quadriceps; the joint is not distended with fluid; in fact, the patella lies in close contact with the articular end of the femur, and cannot be floated by pressure on the capsule above or laterally. There is a sensation of elasticity that may be regarded as due to succulence of the periarticular tissues, and the case is diagnosticated as one of inflammation of the articular ends of the bones, or possibly of tumor albus developed in a lad the subject of rheumatic diathesis; the swelling remained perfectly symmetrical but increased in size, and about the 24th of April fluctuation was made out. April 27th an aspirating needle was introduced, with negative results. Doubt now existing as to the real nature of the case, a consultation was held, and it was considered proper to make free incisions into the joint.

May 4th.—The appearance of the joint is unchanged, forming a large, globular, and somewhat resisting swelling. Manipulation conveys the impression that much of the increase in size depends upon epiphyseal expansion, involving even the lower end of the diaphysis of the femur, but that the larger portion is periarticular and due to succulence of tissues outside of the capsule, and this proliferation of cell-elements gives a deceptive sense of fluctuation, most perceptible on either side of the patella. The latter bone lay in contact with the condyles, and it was thought that movement elicited an obscure grating.

Patient being under the influence of ether, and the spray directed over the knee, an incision four inches long was made on either side of the patella, it being necessary to carry those cuts through an inch of infiltrated tissue before the joint was opened. On inspection, the first thing that attracted attention was the presence of two layers of material resembling decolorized heart-clot. These lay between the articular surfaces, in the position of the ligamentum mucosum. At first they were supposed to represent this structure. On close examination, however, they were found to be layers of new growths, probably exudation products. Each was about two inches in length and three-quarters of an inch in width. The cartilages of incrustation were intact, save at one point on the inner border of the internal condyle. Here the cartilage was encroached upon or replaced by a small, fleshy growth, which was apparently advancing in the form of a narrow crescent over the surface of that portion of the articulation. The oldest portion of this structure, that nearest the circumference of the cartilage, was of a light flesh tint, but the advancing edge was minutely scalloped, arborescent, and vermilion in hue, resembling in some respects a pterygium creeping over the surface from the periphery to the centre. It was not an overlying false membrane, but most probably inflammatory conversion of the cartilage.

Drainage-tubes, traversed by horse-hairs, were introduced transversely above and below the patella. The limb was put up antiseptically, and supported on a plaster-of-Paris gutter reaching from the tuber ischii to the middle of sole of foot.

For the first two weeks after the operation the wound was coated with a gelatinous material similar to what was found in the joint, and in the middle was a dark, thick blood-clot. After this material was cleared away, granulations appeared. These were very red, and bled easily with the slightest pressure. Granulation was accompanied by a free discharge of pus.

About the third week after the incisions were made the patient began to fail very rapidly in strength, did not sleep well at night, suffered pain, appetite was very poor, and the knee was steadily increasing in size and becoming more tense—in fact, he began to suffer from hectic, pulse averaging 120 and temperature 102°, and a second consultation condemned the limb.

May 30th.—The limb was amputated about the middle of the thigh by long anterior and posterior skin-flaps, circular through the muscles. The vessels were tied with catgut ligatures, flaps brought in apposition by fine, carbolized silk sutures, and the stump dressed antiseptically. Patient was in a state of shock for about six hours after the operation. He rallied from it, however, without any further unpleasant symptoms.

June 3d.—Since the amputation bloody serum is all that comes out through drainage-tubes. Patient had a chill; temperature rose to 105¼° F. Large doses of quin. sulph. administered.

June 10th.—Temperature subsided under quinine. It has averaged daily about 100¼°. Discharges are healthy. Appetite improved. General condition considerably better. There has been union, by first intention, of the greater portion of stump.

The following notes of the microscopic appearances were furnished by Dr. SATTERTHWAITE: On examining the knee, after a vertical section had been made through the femur and tibia, it was found that there was a growth surrounding the shaft of the femur, its upper limits being two and one-half inches above the articular cartilage. The extreme length vertically was six and one-half inches, the breadth five inches. In color it was white, mottled with pink. These whiter spots were generally found to be either bone or cartilage, while the pink was some form of sarcomatous tissue. Starting apparently from the periosteum, the fibres of which it was composed radiated out in a fan-shaped manner, as has commonly been observed in this class of growths. The cancellated tissue of the bone was nowhere broken through, and yet it was thinned opposite the attachment of the tumor, and the central portions of the bones were markedly condensed and of a yellowish white color, contrasting strongly with the sound bone, which was pink. Surrounding the tumor was a capsule which was composed of a soft, pulpy, almost gelatinous material. Microscopically the tissue was found to be made up of many of the various elements that belong to the connective-substance group.

The radiating fibres extending from the periosteum were either fibrous, cartilaginous, or bony; some parts in addition were myxomatous, while others contained cysts. The capsule of gelatinous tissue was fibrous tissue undergoing mucoid degeneration. The tumor should be classed among the periosteal sarcomata, and its recurrence may be expected.

MORBUS COXARIUS AND EXSECTION OF HIP.

DR. BRIDDON also exhibited the upper portion of the femur, removed for hip-disease. The following was the history of the case, also from notes by Dr. LACAYO: Harry Stadelberger, æt. 14. N. Y., school-boy; admitted to the Presbyterian Hospital, service of Dr. Briddon, May 27, 1878. With the exception of his father, who

died of phthisis, all the members of the family are healthy. When twenty months old, patient fell downstairs. About two weeks after, he began to suffer from pain in his right hip; the pain was constant, but severe at night. At the end of three months the pain ceased, to return during the spring and fall of the year only. These attacks would lay him up for about three or four weeks. About six years ago an abscess formed and discharged itself behind the joint; several small pieces of dead bone escaped with the pus. About a year ago another abscess opened just below Poupart's ligament. The limb has been gradually contracting from the commencement of the trouble. For the past three weeks his condition has been growing worse. The pain has kept him awake at night. Has lost flesh and his appetite has been failing.

On admission, patient appears to be healthy and strong. The deformity is very pronounced. As he stands, supported by his crutches, his foot in extreme extension touches only with the tip of his great toe; when flexed (the sole parallel with the floor) it requires six inches of blocks to support it. The pelvis is rotated on its axis, projected upward and backward, and there is scarcely perceptible motion at the coxo-fem. articulation. The thigh is fixed at a right angle with the trunk, only slightly adducted and inverted. Lumbar spine very much curved. Upper border of trochanter two inches and five-eighths above Nelaton's line. There are three sinuses: one below the outer extremity of Poupart's ligament, another in the neighborhood of the posterior superior spinous process, and a third one inch above the trochanter. Examination per rectum reveals no evidence of perforation of the acetabulum.

June 8d.—Resection was made by a long incision reaching from the sinus above the trochanter major and passing downward in the direction of the long axis of the bone for a distance of about four inches; the periosteum was separated with some difficulty as far as the trochanter minor. A chain-saw was then passed around and a transverse section of the bone was made immediately above the insertion of the psoas.

The head and neck of the bone were completely destroyed. The inner aspect of the bone removed presented an irregular concave surface, reaching from the digital fossa to the lesser trochanter; this surface was studded with nodular eminences and depressions, but was not carious; it was not covered by granulations; the depressions were filled with gelatinous material, but beneath this the bone was of a pinkish hue and dense in structure. The only points of caries were found on the anterior and posterior borders. At the point of section the bone was sclerosed, but otherwise healthy.

The acetabulum was entirely effaced, filled with new bone which projected above the surface in the form of prominent nodules. Some very small sequestra were found in the space between the bones, but they were so insignificant in size that they almost escaped observation.

Before the operation it was considered that, in addition to resection, it would be necessary to divide the resisting muscles; but no such interference was required, as the limb was easily brought into good position and secured in the wire cuirass.

June 10th.—Up to present date the lad's general condition has improved very much. He sleeps well and suffers no pain. The leg is perfectly straight, and about three inches shorter than its fellow. His temperature was 101½° the eve of the day after operation. Since then it has averaged 101½° daily.

ABSENCE OF RIGHT VENTRICULAR CAVITY—OCCLUSION OF PULMONARY ARTERY.

Dr. H. N. Heineman exhibited a specimen of the above, with the following history:

Female, six months old, died June 2, 1878. Mother was subjected to considerable nervous disturbance during pregnancy. Immediately after birth, child became cyanotic, the cyanosis reappearing and disappearing suddenly, and being present nearly two-thirds of the time. Child was subject to convulsions, which were preceded by signs of pain apparently referable to the præcordial region; the convulsions occurring as often as once in four or five days, as infrequently as once a fortnight, and averaging one a week. Two days before death the child passed some blood by the bowels. Child nursed well, though evidently never in good health.

Autopsy held June 4, 1878. Body was well nourished and weighed about twenty pounds. Lungs were in condition of chronic congestion, with nearly complete filling up of air-cells. *The heart* was normal in size, rather quadrilateral in shape, on account of an hypertrophied left ventricle. The cavity of the right ventricle was absent; only its normally thick muscular wall was found, which upon section showed at its upper portion the chordæ tendinæ of the tricuspid valves. The cavity of the left ventricle was normal. The pulmonary orifice and tricuspid valves were about half their normal size. The mitral and aortic valves were normal. Both auricles were dilated and the foramen ovale large and open. There was no conus arteriosus, and the pulmonary artery, which was small in size, was completely occluded at its origin from the ventricle; it was divided into two branches, the ductus arteriosus, which was of large size and pervious, being connected with the left branch; the first and second portions of the arch of the aorta up to the place of origin of the ductus arteriosus being considerably dilated.

The circulation was carried on as follows: the superior and inferior venæ cavæ emptied their blood into the right auricle, from whence it passed into the left auricle, thence into the left ventricle, and from here it passed into the aorta, a portion of the circulating fluid finding its way through the open ductus arteriosus into the lungs.

CASE OF CEREBRAL HEMORRHAGE WITH MILIARY ANEURISMS, AND ANEURISM OF THE ANTERIOR COMMUNICATING ARTERY.

Dr. Amidon exhibited a specimen of cerebral hemorrhage, with the following remarks:

The true nature of miliary aneurisms and their connection with cerebral hemorrhage was first shown by Charcot and Bouchard in 1866.*

The pathological process leading to the formation of miliary aneurisms is a periarteritis, while atheroma is an endoarteritis. According to them a chronic inflammation leads to granular and fatty degeneration, first, of the perivascular sheath, next of the adventitia, and in some advanced cases of the muscular coat. The adventitia being weakened, a gradual, uniform dilatation of the vessel produces a fusiform, or the rupture of the internal coats a sacculated aneurism. This aneurismal condition is rare under forty years of age (though cases have been seen at twenty), and is often accompanied by atheromatous arteries, hypertrophy of the left ventricle, and cirrhotic kidneys.

The aneurisms occur most often in the opto-striate

* Archives de Physiologie, 1868. Three articles.

bodies and next in the convolutions, vary in number from two to one hundred, and, according to Charcot and Bouchard, are found in almost all cases of what they term the *cerebral hemorrhage disease.*

Case.—June 5th, at 4 P.M., an Irishman, aged sixty, was found insensible on the street.

There was complete relaxation on both sides of body, with abolition of reflex movements on the right side of the face and body. No spasms. No strabismus. Pupils equal and small. Well-marked arcus senilis. The respiration was slow, regular, and not stertorous. Pulse 70, full, with high tension. Radial artery atheromatous to touch.

Temperature was normal. Twenty ounces of urine were drawn; its specific gravity was 1021, and it contained .7% of urea, estimating the normal at 2.9%. No albumen was detected. 10 P.M., six hours after onset of attack, the patient died rather suddenly.

Autopsy twenty-five hours after death: some eccentric hypertrophy of the left ventricle of the heart was found. There were villous vegetations (old) on the aortic valves, with atheroma of the valves and aorta. The capsules of the kidneys were quitè adherent to the atrophied cortex. There was also some atheroma of the vessels at the base of the brain, and a small aneurism (size of bean) on the anterior communicating artery. The left lateral ventricle and the fourth were filled with clotted blood, while in the right lateral and the third there was fluid blood only.

Not being able to find the source of hemorrhage, the existence of miliary aneurisms was suspected.

Charcot's method of slow maceration being too long, a rapid process was tried, which proved very satisfactory. The brain, already much mutilated, immersed in a basin of very warm water, was agitated every two or three minutes with the hands, and the loosened particles of brain-matter washed away. In about twenty minutes there was left only the pia mater and cerebral vessels, which formed a beautiful arborescent mass when floating in the water. Looking closely, was seen small red specks floating in the water, anchored by a slender thread. These are the aneurisms with their afferent arterioles.

To show the fatty degeneration, specimens should be mounted in glycerine. To show the arterial and aneurismal coats, specimens should be stained with hæmatoxylin and mounted in balsam.

The aneurisms in the present case were thirty or more in number, situated mostly in the cortex. While most of the aneurisms were globular in shape and sacculated, some were elongated and fusiform. Their walls were simply adventitia, around and in which was a large deposit of fatty granules, and some large granular bodies, seemingly resulting from degenerated brain-tissue. Some of the aneurisms contained recently coagulated blood and other deposits of fibrin. The arteries everywhere showed advanced fatty degeneration of the perivascular and adventitia sheath, while the muscular tunic and interna appear normal.

DR. WEIR exhibited a so-called tuberculous kidney, removed *post-mortem* from a man who was run over by an ice-wagon, the wheel passing over the abdomen. He had sundry troubles with urination, which necessitated the use of the catheter for three months afterwards. He appeared to be well for a number of months, when a tumor formed in the region of the kidney, attended with much pain, which latter was relieved by a sensation of bursting, and a coincident discharge of pus in the urine. The patient was aspirated two or three times, and finally an incision was made directly into the tumor, causing the discharge of a cheesy material. Dr. W. was in favor of extirpating the kidney, but the consultation decided to the contrary. For a month there was decided relief from pain, and a decrease in the discharge of the pus. Gastric irritation soon after showed itself, eventuating in a low grade of peritonitis, and death about two months after the incision.

A discussion ensued concerning the propriety of calling such kidneys tuberculous, and was participated in by Drs. Satterthwaite, Heitzman, Heinemann, and Abbe.

Correspondence.

ACUTE LEAD POISONING.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—Cases of acute lead poisoning are so rare that I am induced to send you an abstract report of the following one that recently came under my care in this village:

J. F., æt. 51, Irish, hostler, intemperate, after a protracted debauch, took three ounces of lead acetate, stirred in a tumbler of water; went to bed and slept six hours. He awoke feeling tolerably well, was about the village during the day, and only suffered from slight colic.

I was summoned twenty-four hours after he had taken the poison, and found him pale; anxious; pulse 58, feeble; temperature 97° F.; abdomen tense and retracted. He had vomited three pints of fluid matter, containing blood and shreds of mucus; ejection black from change of acetate to lead sulphide. Emesis was encouraged by draughts of tepid water acidulated with H_2SO_4 (℥ss. to Oij.), when vomited matter became clear ℥ij. magnesia sulphate were given, largely diluted.

Second visit, six hours after: Vomiting persistent, copious, without straining; prostration extreme; hands and feet numb; calves of legs cramped; pulse 50; no dejection; no urine voided since taking the lead; abdomen hard and nodulated; colic pains constant, particularly severe and burning at pit of stomach; general tremor of body; unable to stand because of vertigo; urgent thirst. Ol. ricini ℥ij., ol. tiglii ♏ij. were given at once, and acidulated water (H_2SO_4 ℥ss., aq. Oij.) ad libitum.

Third visit, four hours after: Bowels moved freely, dejected matter, similar to that vomited, plus small quantity of scybala; vomiting continued, though less frequent and in smaller quantity; colic but slightly relieved. Acid drink continued, and tr. opii. ♏xx. hourly.

Fourth visit, four hours later: Bowels moved twice since previous visit; no vomiting; passed four ounces of highly-colored urine; blue line distinct along edge of gums; greatly prostrated; vigilant; delirious (potomania?). Treatment adopted at former visit continued with spts. frumenti ℥j. half hourly.

Fifth visit, four hours later: Free from pain; very feeble; perspiring freely; coherent; slept two hours since last seen. Opium and whiskey omitted.

After this improvement, though slow, was continuous, and ten days after first visit he was able to work again. During convalescence he had acidulated drink, an occasional stimulant with bland diet.

JOHN F. LUCK, M.D.

CLOSTER, BERGEN CO., N. J.

New Instruments.

A NEW CLINICAL FEVER THERMOMETER, WITH INDESTRUCTIBLE INDEX.

By W. R. LEONARD, M.D.,

NEW YORK.

The accompanying cut shows a registering clinical thermometer, which more nearly possesses the great requirement of an indestructible index than any other yet contrived for the purpose.

The contraction of the bore of this thermometer is so extremely minute as to obviate the necessity for any air speck whatever, and then no possible destruction of the index can take place, as an index is formed at every observation by this peculiar contraction, itself cutting off the entire column above it from the bulb portion below it, and thus we may, if we choose (no necessity exists for so doing), shake the entire column (index included) into the bulb, and every time we warm the bulb a new index is formed for us by the contraction itself.

It is well known that the means by which the index-piece is formed in all clinical thermometers is by an air speck introduced in the column, which separates a portion of the mercury, leaving the said portion to act as it does —that is to say, it remains fixed at its attained point until violently shaken down for a new observation; that the various improvements have had for their object simply the preservation of this detached piece or index, whether by the contraction of the bore at a place near the bulb, or by a contraction and slight enlargement combined (Casella's patent), or by means of a twisted stem (which has also been made the subject of a patent).

The thermometer we here present seems to us to entirely meet the object required without being subject to the liabilities of all the preceding forms, and we therefore feel that they need only be known to be preferred to any of those now in use.

Some physicians doubtless have noticed in very finely contracted stem fever thermometers a liability to leave not only the index-piece when applied to a patient, but also the column itself, which has propelled the index-piece to its place; in other words, that not only does the index-piece not retreat, but the entire column in some instances remains above the contraction, until finally made to retreat by the usually swinging motion required for all self-registering clinical thermometers.

The cause of this is a peculiarity in the contraction itself, which frequently occurs in the process of contracting, and it is as difficult to produce, as it is to prevent its occasional occurrence. It has frequently been a subject of complaint as a supposed defective state of the instrument, while in reality no defect whatever existed, inasmuch as wherever it existed it was actually a double security for the safety of the index, instead of the single protection afforded by the contraction. These thermometers are manufactured and for sale by Shepard & Dudley, New York.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 10th to August 17th, 1878.

BAXTER, J. H., Colonel and Chief Medical Purveyor. To inspect Medical Purveying Depot at San Francisco, Cal., and, *en route* back to Washington, that of St. Louis, Mo. S. O. 175, A. G. O., Aug. 14, 1878.

IRWIN, B. J. D., Major and Surgeon. Granted leave of absence for one year. S. O. 176, A. G. O., Aug. 15, 1878.

NOTSON, W. M., Major and Surgeon. Relieved from duty in Dept. of the Platte, to proceed to Philadelphia, Pa., and on arrival report by letter to Surgeon-General. S. O. 176, C. S., A. G. O.

KINSMAN, J. H., Capt. and Asst. Surgeon. Assigned to duty at Baton Rouge Barracks, La., as Post Surgeon. S. O. 22, Dept. of the South, Aug. 7, 1878.

LAUDERDALE, J. V., Capt. and Asst. Surgeon. Relieved from duty in Dept. of the Missouri, ordered before Army Medical Board, in New York City, for examination for promotion, and then report by letter to Surgeon-General. S. O. 176, C. S., A. G. O.

FITZGERALD, J. A., Capt. and Asst. Surgeon. Relieved from duty in Dept. of the Columbia, and ordered before Army Medical Board, in New York City, for examination for promotion, and then report by letter to the Surgeon-General. To take effect when his services can be spared. S. O. 176, C. S., A. G. O.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 17, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Aug. 10, 1878.	0	18	28	1	3	26	0	0
Aug. 17, 1878.	0	20	29	1	6	23	0	1

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE.
WASHINGTON, D. C., August 15, 1878.

To Medical Officers of the Marine Hospital Service:

As several of the medical officers of this service have been called upon by the civil authorities to take charge of vessels supposed to be infected with yellow fever, and to assume other responsibilities under the National Quarantine Act, it is proper to state that the quarantine law was enacted too late for Congress to make an appropriation for carrying it into effect this year, though by personal exertion everything is being done which is possible without the expenditure of money. The strictly executive duties which the act imposes upon the Surgeon-General of the Marine Hospital Service have reference to external quarantine—to vessels coming to ports of the United States from without.

The act expressly provides that this office shall not interfere with or impair any sanitary or quarantine laws or regulations of the States or cities; which may be interpreted to refer especially to land quarantines and the health rules of cities. Medical officers of this service are, however, required to assist the civil health

authorities in all proper and practicable ways when requested to do so; and, in view of this fact, and the prevalence of yellow fever in several of the inland cities of the United States, it seems desirable that the Surgeon-General should make known his individual views in reference to the disease and its prevention—these views not to be regarded as having official force.

The weight of scientific evidence seems to warrant the conclusion that yellow fever is produced by an invisible poison, capable of self-multiplication outside of the human organism, which it enters through the air-passages. The poison-germ, or miasm, is a product of the tropics. In this country yellow fever has prevailed in most of the Gulf and Atlantic cities, and in many of the towns along the Mississippi River. In some instances it has been carried inland with the people fleeing from infected localities, but it has never shown a disposition to spread epidemically at points remote from the continuous water-roads of commerce, or to lodge in high, salubrious places. The cities of the great lakes have always been free from the disease. Yellow fever cannot be said to be endemic in the United States, from the fact that in some years it does not appear, though the imported germ undoubtedly survives the mild winters. It appears to have about as much resistance to cold as the banana-plant. When the banana-stalk is killed down by the frost, the yellow fever does not recur until again imported. The germ is transmissible. It is capable of being transported in the clothing or personal effects of passengers and sailors, but its spread from one city to another is chiefly accomplished by vessels—their damp, filthy holds and bilge-water being its favorite lurking-places.

Confinement, moisture, and high temperature favor the multiplication or virulence of the poison. When a wharf, or spot of ground, or a house becomes infected, the poison at once commences to spread, creeping slowly in all possible directions, continually enlarging the area around the centre of infection, unless checked by disinfection, as has undoubtedly been done by the use of carbolic acid in New Orleans in former outbreaks. Yellow fever is not communicated from the sick to the well; the sick and well being dangerous only as possible carriers of the poison-germ or miasm. In support of this assertion it may be stated that, at quarantine hospitals, where the effects of yellow fever patients are burned, or otherwise thoroughly disinfected before the admission of the patients, the attendants do not contract the disease. This has been demonstrated many times. All well persons whose effects have been disinfected may be considered harmless after six or seven days have elapsed from the time of leaving an infected district or vessel, as the period of incubation of the disease lasts from two to six days. This simplifies the question of quarantine—absolute land quarantines being deemed impracticable—and indicates the direction of preventive measures to the vessel, cargo, or the locality, if the poison have found lodgment on shore. A vessel may escape infection if kept clean and dry, and all parts capable of being closed are frequently subjected to the fumes of burning sulphur, and the men employed on board are compelled to bathe and change their flannels daily, and not allowed to sleep on deck or in the hold of the vessel. There is an example of a ship trading between Havana and New York, upon which these precautions have been enforced for a period of twelve years, and not a single case of yellow fever has occurred on board. Though not sufficiently demonstrated to state as a fact, still there seems good reason to believe that much may be accomplished by individual prophylaxis—by the use internally of small doses of sulphate of quinia at regular intervals, and of tincture of iron and chlorate of potassa. As the poison enters the system through the air-passages, it has been suggested that the nasal passages be bathed frequently with a solution containing quinine, to be applied by means of a nasal spray.—JNO. M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE,
WASHINGTON, D. C., Aug. 17, 1878.

NATIONAL QUARANTINE REPORT.—Abstract of sanitary reports received during the past week under the National Quarantine Act:

New Orleans.—Since last report 471 cases of yellow fever and 121 deaths, making 902 cases and 239 deaths, of which 108 cases and 29 deaths occurred during twenty-four hours to noon yesterday.

Port Eads.—33 cases of yellow fever and 5 deaths during the week to yesterday evening.

Grenada, Miss.—The first case of yellow fever occurred July 25th. To noon yesterday there had been 125 cases and 47 deaths.

Mobile.—One death from yellow fever yesterday—a colored woman, who, it is reported, had been on an excursion to Biloxi, Miss., July 24th.

Cincinnati.—Since last report a young woman, living in a house where baggage believed to be from New Orleans was stored, died of a fever resembling yellow fever. Another case of fever, of similar character, has since developed in the same neighborhood. Steamer *John A. Porter*, from New Orleans, had four deaths from yellow fever before arriving at Cincinnati, which city she passed on Friday, bound for Pittsburg, with several cases on board. One man, who left the *John Porter* at Louisville, proceeded to Cincinnati by rail, where he was sent to hospital on the 13th inst. with fever. The steamer *Golden Rule* passed Cairo yesterday evening for Cincinnati with two cases of yellow fever on board. Two deaths occurred on board that vessel Thursday.

Several people from New Orleans and Port Eads have sickened or died of yellow fever on their journey northward; one case at Covington, Ky., one at Cairo, and three deaths at St. Louis.

Memphis.—The first case of yellow fever occurred August 13th, in the person of a woman whose eating-house was frequented by river boatmen. The disease has spread rapidly, but has not yet assumed a malignant type.

Vicksburg.—Yellow fever has appeared since last report; the first death occurred August 12th. Advices to noon to-day report the outbreak of the disease near river front within last fifteen hours, from whence it is spreading rapidly.

Havana.—99 deaths from yellow fever and 9 from small-pox during week ending August 10th.

Cardenas and Sagua la Grande, Cuba.—No cases of yellow fever during week ending August 9th.

Matanzas.—Decrease in yellow fever week ending August 9th.

Calcutta.—10 deaths from cholera week ending June 15th.

Bombay.—25 deaths from cholera, week ending June 25th.

Reports from other places indicate good health.—JNO. M. WOODWORTH, *Surgeon-General Marine Hospital Service.*

DR. BENJAMIN R. ROBSON, the oldest physician in New York, an incorporator of the County Medical Society of the City of New York, and for many years its treasurer, died Aug. 18, 1878, in the ninety-third year of his age.

Original Lectures.

ACNE AND ACNE ROSACEA.

CLINICAL LECTURE DELIVERED AT THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

By H. G. PIFFARD, M.D.,

PROFESSOR OF DERMATOLOGY.

(Reported for THE MEDICAL RECORD.)

ACNE—ACNE ROSACEA—CAUSES—TREATMENT FOR ACUTE AND CHRONIC STAGES.

GENTLEMEN:—The first patient whom I present to-day is one who has an eruption upon the face. It is an eruption with which you are all more or less familiar, because it is not by any means infrequent or uncommon. The question is, from what form of skin disease is this man suffering? He has had it continuously for about two years, but about every alternate week these little points which you see get larger. In the first place, there is a general redness of the surface. In addition, you will notice a large number of elevations; some of these are red and solid, others are mounted by little yellowish points; and here is one which is rather soft, but at the same time you do not see any yellowish point at its summit. When this soft elevation is punctured, it is, as you see, filled with pus.

On the face of this second patient there is an eruption which is very similar in appearance to the one just described, yet the eruptions in these two cases differ from each other considerably. The eruption upon this woman's face is of two years' standing. Her general health is very good. The *first* is a case of pure *acne;* the *second* is a case of *acne rosacea.*

ACNE ROSACEA.

Acne rosacea is a skin affection which is always located upon the face; it is never found elsewhere, and it usually commences in the following manner: at the very beginning it will be found that there are present little reddish *rosy* spots; sometimes these little spots are accompanied by slight circumscribed infiltration of the surrounding skin. These spots are almost invariably situated upon the summit and sides of the nose, and extend from the nose to the cheeks. The small reddish spots, *guttæ* as they are sometimes called, last for a few days, perhaps for a week, and then disappear, to return in the course of a few weeks. As time goes on, for the disease is exceedingly chronic, the number of these spots increases, and they remain upon the skin longer than at first, but as they disappear they are apt to leave a slight thickening of the skin. After a time, the new spots which appear are seen before the older ones have disappeared, so that at the end of one year, perhaps, you will find a pretty uniformly diffused redness, with a slight amount of thickening of the skin. This redness disappears in a measure under pressure, but returns as soon as the pressure is removed. The color, however, does not disappear as rapidly as in acute congestion.

In addition to the redness of the surface, we now find that the veins upon the sides of the nose are increased in size. When the disease has lasted for some time, the veins become prominent, especially about the alæ of the nose. When it has had a duration of perhaps three or four years—in some cases it occurs much sooner—the thickness of the skin covering the nose, the enlargement of the veins, and the redness are very much greater than in health, and the same changes, to a less extent, are manifest upon the cheeks.

The skin of the nose may perhaps be increased in thickness three, four, or five times, thus giving the organ a very uncomely appearance. Formerly this condition was regarded as the opprobrium of skin diseases, because it was one of the most difficult to relieve. But as we have gained a better knowledge of its causes we are, in may instances, able to remedy the cause upon which it depends, and then by appropriate local treatment to diminish very decidedly the amount of the lesion.

CAUSES OF ACNE ROSACEA.

First, with regard to causes. The disease rarely occurs in young persons; it occurs most frequently between the ages of thirty-five and forty-five years. In men, it depends most frequently upon some derangement of the digestive function. This derangement of the digestive function may be the result of functional or organic disease of the stomach and liver. You are all aware that habitual indulgence in the use of alcohol produces this rosaceous condition of the skin of the nose. That is not due so much to direct congestion of the face produced by the liquor, as to dyspepsia and congestion of the liver, which, by reflex action, disturbs the circulation of the face, and thus tends to produce congestion. Any cause whatever which is capable of congesting the face acts as a predisposing cause of acne rosacea. The face may be kept almost constantly congested by following certain occupations. It has become proverbial that cooks are more subject to rosacea than any other class of persons. Next to them come blacksmiths and forgers of metals. You all know that a full meal will produce more or less temporary congestion of the face. As digestion goes on and the stomach becomes empty, this congestion passes away. Now, if these causes of congestion are in constant operation—if, for example, a man lives too high and habitually drinks too much alcohol, and thus keeps his face in a constant state of congestion—the *rosaceous* condition is apt to develop.

In women, however, there is another class of causes which, in a majority of cases, operates in the production of rosacea. In them, the rosaceous condition is not so often due to derangement of the digestive function as to derangement of the uterine function. Certainly more than one-half the cases of rosacea occurring in the female have their origin either in functional or organic diseases of the ovaries or uterus. You have already learned of the intimate relation which exists between the generative organs and the circulation of the face.

When these organs are diseased, we find that the skin of the face very often makes it manifest by congestion during the time the uterine disease exists. If the uterine disorder is chronic, there is a tendency to continued congestion, and ultimately a rosaceal condition is developed.

As causes of acne rosacea, therefore, we may look to occupation, derangement of the stomach or liver, and derangement of some portion of the generative apparatus, more especially of the uterus and ovaries.

TREATMENT.

You can readily perceive, as we come to speak of the treatment of these skin affections, that, if the causes of a constant, or almost constant, congestion of the face can be removed, we have an opportunity to treat the case successfully. But if we cannot remove these causes, if they are in constant operation, all that we can do in the way of treatment is simply palliative.

At the very outset, therefore, we should inquire regarding the general health of the patient, especially with regard to derangements of digestion, disorders of the liver, irregularities of the bowels, etc. In the female special inquiry should be made with reference to the uterine functions. We should never forget to make close inquiry with reference to the habitual use of alcoholic stimulants, and determine as nearly as possible the quantity consumed daily. In the case before us there is quite recently an accession of the rosaceal condition. He says he has been in the habit of using alcoholic stimulants in considerable quantities, but has given them up; he has not taken very much during the past *two* weeks. He has been in the habit of taking sometimes as many as *twenty* drinks a day, but not sufficient to get really drunk. His former drinking has probably affected his liver, and in consequence congestion of the face has been induced, and the two or three drinks which he now takes daily are sufficient to maintain this congestion. The damage done by a single potion is not overcome before another is taken, and in that manner there is kept up a constant tendency to congestion.

In our other case the patient doubtless has some uterine disorder, and this is to be suspected from the location of the eruption about the mouth.

The man has, in addition to the slight rosaceal condition, papules and pustules of acne. The two diseases, as I have already stated, are distinct, but in the rosacea we very frequently find acne in addition.

Both the acne and the rosacea are dependent upon the same class of causes. The first thing this man must do, if he wishes to get rid of the eruption upon his face, is to stop using alcoholic drink. We should next examine with reference to hepatic congestion, and endeavor to correct all disorders of the stomach, liver, and bowels. When that is done, we should consider what is best to be done in the way of local treatment.

LOCAL TREATMENT OF ACNE.

We have here pustules, papules, and a certain amount of redness. Our first effort should be to remove the congestion as quickly as possible. The pustules should all be punctured; and in opening them we should cut pretty wide and reasonably deep. The papules should be treated in the same manner, and in putting your knife through them make the incision sufficiently deep, so that they will bleed quite freely. In other words, make local depletion.

Next in order, the best application to reduce the congestion would be a poultice. If more convenient, the face can be held in hot water. To do this, let him take a basin of hot water, immerse his face, withdraw it, breathe, immerse it again, and so go on bathing the parts for some time every evening. Another method is to cover the face with pieces of muslin kept constantly wet with water as hot as it can be borne. As means for relieving local congestion, therefore, use local depletion and a poultice, which induces resolution by stimulating the circulation.

In the course of a week, if this plan of treatment is followed out faithfully, a very decided bleaching of the parts will be produced. If there is very much congestion of the skin not invaded by the pustules and papules, little scarifications may be made wherever it is most marked. Although the color at the end of a week, perhaps, may be very much improved, still there will remain a certain amount of thickening of the skin. That infiltration must be reduced, as you have often been told, by the use of alkaline applications. The face should be thoroughly rubbed three or four times a week with green soap. The soap will cause an active inflammation that will soon subside, and leave the skin yet red, but with the thickening very much reduced. The skin then usually has a polished, shining appearance.

When the infiltration and thickening have been removed, and nothing remains but the red color and polished appearance of the skin, this is most readily removed by the application of sulphur. For this purpose a wash, prepared according to the following formula, may be employed:

℞. Lac. sulphur,
Glycerine,
Rose-water,
Bay rum, ää.

This should be applied every night.

In this manner, if the exciting causes have been removed, a pretty good cure can be effected in the course of two or three months.

When a varicose condition of the veins is present, the veins must be destroyed. This can be done either by dividing them crosswise, or, still better, by dividing them lengthwise, throughout their entire extent, with a thin, sharp knife, and then, if you choose, rubbing into them a small amount of the persulphate of iron. The veins can also be obliterated by touching them with a white-hot needle. The point in this item of the treatment is, by some means, to obliterate the veins.

For the thickened condition of the skin, present later in the disease, you will be obliged to institute an entirely different course of treatment. In the third, or last stage of the disease, the redness which characterized the earlier stages may have in great measure faded, and the principal lesion will be a marked hypertrophy of the skin. Internal medication will have little influence upon this condition. It may be diminished, although I have never seen it entirely removed, by the use of the constant galvanic current applied directly through the nose. In other cases red-hot needles will destroy more or less of the thickening, and the punctures on healing will induce a certain amount of contraction in the neighboring skin. When the thickening is excessive, excision of portions of the integument may become necessary.

THE QUESTION OF AMPUTATION IN COMPOUND FRACTURE OF THE LEG.

CLINICAL REMARKS MADE IN BELLEVUE HOSPITAL.

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GENTLEMEN:—The case before us presents several points of special interest. Its history is briefly as follows:

This man, æt. 34 years, a few hours before admission to the hospital, was thrown from the front platform of a street-car, and received a compound and somewhat comminuted fracture of the tibia. It could not be ascertained whether the car-wheel passed entirely over the limb, or whether it merely struck the limb and pushed it to one side.

When he was brought in there were several wounds of the soft parts, and they communicated with the bone, and there was also considerable hemorrhage.

The question of immediate amputation suggested itself, but in view of the fact that the man was suffering considerably from shock, it was decided to cover

the wounds with lint and a roller bandage, and allow him to remain quiet for a few hours. The limb was dressed according to Lister's method. The man recovered from the shock; the hemorrhage almost entirely ceased. The general condition of the limb and of the patient was very good. At the end of twenty-four hours there was so much oozing from the wounds that the limb was simply placed in a fracture-box filled with bran. Carbolized water was used for wetting the lint or pieces of cloth which immediately covered the wounds; the limb was kept as clean as possible and allowed to remain in the fracture-box a few days. For one or two days it seemed that amputation would be inevitable, but the fragments and the limb were kept as quiet as possible, and the unfavorable appearance began to disappear. After a few days, in order to preserve perfect immobility, and at the same time to allow of ready inspection, the upper part of the leg and the foot and ankle were encased with a plaster-of-Paris bandage and covered with silicate of soda, and in these casings, as they were being applied, were secured strips of galvanized iron (large wire would answer equally as well) bent with elbows, so that when the dressing was completed the fractured portion was left uncovered, and yet supported by the iron strips by which it was arched and surrounded.

Twenty-six days after admission to the hospital the wounds were quite well contracted, the discharge was diminishing, and a case which at one time was threatening was progressing towards a perfect cure; the compound had been nearly converted into a simple fracture.

Remarks.—In the majority of cases of compound fractures produced by car-wheels, especially of the tibia and fibula, immediate amputation is required. When called to see a case of this character, the question to be decided first is, whether or not an attempt shall be made to save the limb, and to secure for the patient a useful extremity.

This is sometimes a very difficult question to answer. It is a question upon which there may be a very great difference of opinion among surgeons. Some will condemn such a limb at once, while others will endeavor to save the limb, in accordance with the principles of conservative surgery.

You must be very careful, however, that in your attempts to save the limb you do not sacrifice the life of your patient. I do not suppose there is any one who has had an extended hospital experience who cannot recall a case in which, if amputation had at once been performed, the life of the patient would probably have been saved. On the other hand, it is possible that cases can be recalled in which amputation was performed, and in which the limb probably might have been saved. It is very difficult (impossible) to give a set of rules by which you shall be positively directed in reaching a decision in any given case. It is easy to understand, if there is a great amount of comminution of both bones of the leg and extensive laceration of the integument and muscles, that it would be dangerous to undertake to save the limb. Amputation should be performed as soon as reaction is established. If you are called to a case in which the bones are fractured, but not comminuted, the muscles are extremely lacerated, and there is danger that the integument will slough, amputation is demanded. Again, if you are called to a case in which the fracture is simple, without comminution, and the main artery of the limb is severed, but you are unable to secure the vessel at the wound, immediate amputation may be demanded.

If, on the other hand, you are called to a case in which there is a compound fracture and there is only a moderate amount of laceration of the soft parts, and you know that the patient has a bad constitution—for example, is intemperate—the chances are that the patient will do better with amputation than under an effort to save the limb.

If the joints, either the knee or ankle, are involved in the fracture, the case is probably one in which amputation will be considered.

These are general rules by which you can be guided in deciding the question of amputation in the *lower extremities*, but to them there are necessarily many exceptions.

In cases of fracture of the same character involving the upper extremities, the general rules governing treatment are somewhat different.

In cases in which a joint is opened, or one of the main arteries—the radial or the ulnar—an effort may be made to save the limb by ligating the bleeding vessel high up or at the wound. These are general rules, and by them the patient at least may have the benefit of a doubt, for recourse may yet be had to secondary amputation.

There is one point which I have overlooked with reference to the treatment of compound comminuted fracture. If you pass your finger into the wound, you may find several loose pieces of bone. Shall they be removed, or shall they be allowed to remain? For my own part, I prefer to meddle with them to the least possible extent. If a loose piece of bone lies near the opening in the integument, it may be removed; but if it be situated at much depth, or is in the least attached, it is better to allow it to remain. After the lapse of a few weeks it will, if it is to be removed, become separated from the soft parts, when it can be removed by a secondary operation. If, on the other hand, union does not take place, and the non-union is due to the presence of a fragment between the broken ends of the bone, it must necessarily be removed before union will occur. These are general rules which may render you some assistance in the management of compound fractures.

CLASS-ROOM LESSONS ON SYPHILIS,

GIVEN AT THE COLLEGE OF PHYSICIANS AND SURGEONS IN THE CITY OF NEW YORK.

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[For The Medical Record.]

Lesson IV.

EARLY DIFFERENTIAL DIAGNOSIS — THE PERIOD OF INCUBATION—THE INDURATION OF SYPHILIS ESSENTIALLY NON-INFLAMMATORY—ILLUSTRATIVE CASES—THE SO-CALLED SYPHILITIC ROSEOLA.

Gentlemen:—I will next direct your attention to the *early differential diagnosis* of the initial lesion of syphilis.

The characteristic and only constant feature of all lesions, during the active stages of syphilis, is shown, by microscopic examination, to consist in a localized cell-accumulation.

Consideration of the nature and behavior of this material will afford intelligent aid, in a differential diagnosis, between the initial lesion of syphilis in its early period and solutions of continuity from other causes. As far as known, syphilis is primarily a process of cell-growth and accumulation, so rapid that it interferes with healthy *tissue* growth by obstructing the

processes of nutrition and development; not of necessity interfering to the extent of causing death of tissue, but of impairing its vitality and thus causing it to break down more rapidly under influences which favor solutions of continuity. Hence we have presenting, as *characteristic* initial lesions of syphilis, either a neoplasm, dense, insensitive, and covered with unbroken and apparently normal cuticle or mucous membrane; or, from the causes above mentioned, some one of the various characteristic *solutions of continuity* described in Lesson I.

In addition to the foregoing *characteristic* lesions, we may also find early local disturbance in various forms and from various causes associated with the beginnings of syphilitic cell-accumulation, but presenting no features *characteristic* of syphilitic inoculation.

The known fact, however, that syphilitic infection not unfrequently follows a wound of inoculation which heals promptly and with no subsequent solution of continuity, is sufficient to prove that *neither* INFLAMMATION *nor* ULCERATION *are essential features in a syphilitic inoculation.*

Thus, wounds, abrasions, broken vesicles, pustules, or ulcers, *may* receive a syphilitic inoculation, and progress or heal as if no such inoculation had taken place.

It is then evident that no *positive* differential diagnosis can be made *at once* between lesions which *will* be followed by syphilitic infection and those which *will not.* A positive decision cannot be rendered until after such *interval* from latest exposure as may be required to develop some characteristic cell-accumulation, either on the site of the lesion or in the adjacent lymphatic channels and glands.

This *interval* is recognized by all authorities as a clinical fact, and is characterized as "THE PERIOD OF INCUBATION OF SYPHILIS."

The term was invented in accordance with a belief (formerly prevalent) that the *virus* of syphilis was a mysterious, impalpable influence. That this, having entered the system at a given point, instantly permeated the fluids and solids of the entire organism. It then accumulated by "a kind of germination" until the point of "*saturation*" or extreme limit of tolerance was reached. This event was announced by a peculiar and characteristic action at the point of entrance of the virus, which was termed the *chancre.*

It is plain, however, that such a view of syphilitic infection can have no support if we accept the view of a cell-degradation and a systemic syphilitic infection, in accordance with known histological, physiological, and pathological laws.

It is, then, to the local conditions at the point of inoculation that we must look for the earliest evidences of syphilitic action. This is afforded at first through the microscope, by discovery of a densely packed *non-inflammatory* cell-accumulation,* which steadily increases until it is appreciable to the ordinary touch. The same cell-accumulation is also seen to occur in the lymphatic vessels connecting the initial lesion with the adjacent lymphatic glands. These vessels are not unfrequently found obstructed and indurated, and like knotted cords the size of a crow's quill, or larger, often easily traceable to their gland termination. The associated blood-vessels are never narrowed or interrupted from this cause.

* The only recognizable cell-accumulation in syphilis is confined to the lymphatic system. If, during the period of so-called incubation, the syphilitic influence has found access to the general circulation, no evidence of it has ever been discovered in the condition of blood-vessels, or of the blood, or in the conditions or sensations of the persons so affected.

The local induration of a suspected lesion, however, is not *positive* evidence of syphilitic action. Cell-accumulation, sufficient in degree to produce well-pronounced induration, may result from *irritation* of a *simple* lesion. Thus, an herpetic vesicle, or pustule, even a simple abrasion, through friction from clothes, or from applications of caustics or astringents, may become indurated sufficiently to raise grave suspicions of syphilis.

Induration, in such cases, is always the result of *inflammatory* action.

The induration of *syphilis* is essentially *non-inflammatory.* The differential diagnosis is aided by means used to combat the inflammatory condition. Under the influence of rest and local sedatives the *incidental* induration is promptly dissipated; in the initial lesion of syphilis the induration is made more salient. Sometimes, though rarely, the induration is quite obscured by a slight localized serous effusion, which gives it a bluish appearance. This I have observed in two cases where the lesion was on a finger. The same condition quite frequently succeeds well-marked indurations near *fossæ glandis*, and is so persistent as to become a valuable diagnostic mark.

The induration may be said to be *characteristic* when insensitive, dense, and resistant, like cartilage. If pressed between the thumb and finger, it becomes exsanguinated, and like in appearance to the tarsal cartilage when the eyelid is turned back.

Even this most positive evidence of syphilis cannot be accepted as conclusive. The induration of a commencing *epithelioma* simulates it very perfectly, and, if an open lesion, its secretion under the microscope presents appearances almost identical. In summing up the whole matter, we are forced to confess that a final decision in any given case is not warranted until some other evidence is present besides the appearance and character of the *local* lesion.

In all cases, where possible, *the person from whom syphilis may have been acquired* should be carefully examined.

In making such examination, search not only for the initial lesion, but for each of the possible *secondary* manifestations. Even when such are found, it must be borne in mind that *a breach of surface on the person exposed* is essential to the acquirement of syphilis, and that, this surface must be brought into CONTACT with the syphilitic secretion, either *directly* or *mediately.* So that while the presumptive evidence furnished by *confrontation* is often strong, it is not *necessarily* conclusive.

The following cases will serve to illustrate the importance of caution in arriving at conclusions in regard to the true nature of venereal lesions:

CASE I.—Mr. T., aged 23, on the fourteenth day after his first and only connection, noticed a slight urethral discharge. Under the microscope this was found to be distinctly purulent. No pain on urination. Meatoscope showed the mucous lining of the urethra deeply congested for half an inch. Beyond this there was no purulent secretion; appearances normal. The difficulty was evidently not *gonorrhœal.* A *syphilitic inoculation* was suspected. Examination of the woman with whom he had connection *showed her to be passing through the active stages of syphilis.* No initial lesion was found; but the inguinal, epitrochlear, and cervical glands were characteristically enlarged. Several *mucous tubercles* were discovered within the vulva, one in the *cervical sulcus*, and three on the *os tincæ.* Besides these was a double row around the *anus*, eroded and secreting pus freely. In the presence of such evidences of syphilis, it seemed

impossible that the young man could have escaped infection. The urethral discharge was probably caused by a syphilitic inoculation which had not yet produced a well-defined initial lesion. Inguinal glands of both sides slightly enlarged. Treatment for syphilis deferred (much against the patient's wish) until evidence of syphilis should become more positive. *The urethral discharge gradually declined, and disappeared entirely in about a month.* Up to the present time (four years from date of exposure) patient has not had the slightest evidence of syphilitic trouble.

Case II.—Mr. H., aged 30, had a suspicious connection in May last. On the third day following he noticed several small pimples on his prepuce. Fearing venereal disease, he consulted his family physician, who at once pronounced the trouble a simple *herpes.* A mild lotion was recommended. Under its use all evidence of disease disappeared within a few days, and the patient was assured, in the most positive manner, that he was free from the disease. June 10th, four weeks after the suspicious connection (and more than two after he had been pronounced free from the disease), the patient was brought to me by his physician for an opinion with regard to a small, hard, eroded nodule on the former site of the *herpes.* Inguinal glands on corresponding (right) side characteristically enlarged. My belief that the nodule was an initial lesion of syphilis was strongly expressed, and the gentleman was put upon a mercurial course. A month later he called, presenting a well-marked roseola, with the usual secondary gland enlargements. His wife, who accompanied him, had an indurated initial lesion on the lower border of the meatus urinarius, and well-marked inguinal enlargement.

Case III.—Mr. W. V. No unusual trouble until two and a half months ago, when, ten days after a suspicious connection, he noticed a small sore on the right side of the penis. He consulted a surgeon, by whom he was informed that he had a "*soft chancre;*" that he would quickly destroy it by the application of nitric acid, and further, that *there need be no fear of subsequent trouble.* The cauterization was made, was repeated several times, at intervals of three or four days; healing finally took place in about three weeks. Patient had connection with his wife the night previous to receiving the surgeon's opinion that he had a *soft chancre;* no connection since.

This gentleman called upon me to ascertain the cause of a papulo-pustular eruption, which was confined to the face and neck. I at once recognized it as syphilitic; examined the cicatrix of the so-called *soft* chancre, and found it distinctly indurated. Gland enlargements of elbow and neck all well pronounced and characteristic. In answer to an anxious inquiry as to the possible infection of the wife, I was obliged to admit the possibility of such a calamity. He assured me that she had been, and was then, perfectly well in every respect, "*except that she had little swellings in the right groin; not the least pain.*" An examination of the lady on the following day disclosed characteristic gland enlargements, not only in the groin, but in the arm and neck. No search was made for the initial lesion. She was put upon constitutional treatment for "*a form of leucocythemia,*" and remained in blissful ignorance as to the nature of her own and her husband's trouble.

SYPHILIS—DIFFICULTY IN DIAGNOSIS—LATE APPEARANCE OF THE ROSEOLA.

Case IV.—This case, gentlemen, contains a few interesting points. It illustrates the difficulty we sometimes encounter in making a diagnosis, and the reward that may be received by prolonged attention to the progress of a case.

Those of you who have attended my clinics on the Island will remember that this man was presented each time as one concerning whom there was a doubt regarding diagnosis. He entered the hospital six weeks ago, and at that time gave a history of having had connection four weeks previous to his admission. The intercourse resulted in a soreness at the end of the penis, accompanied by a urethral discharge. When he came into the hospital there was considerable œdema of the glans penis and paraphimosis. The constriction was so great that there was danger of loss of tissue by gangrene if prompt relief was not afforded. The prepuce was divided at the seat of constriction, but the œdema still continued. The circulation, of course, was restored to such an extent as to relieve the patient of immediate danger from sloughing, but the œdema has been persistent and is present, to some extent, at the present time. There was no induration in the tissues at any point; there was no evidence of chancroidal action except the slight erosion, not at all characteristic of chancroid. There was no positively diagnostic enlargement of the inguinal glands, nor was there any evidence except this persistent œdema and the slight discharge which gave rise to the suspicion that there was a sore in the urethra. This discharge was supposed to be gonorrhœal until the swelling of the glans occurred. The patient remained in the hospital, and we have waited four weeks to see whether any secondary symptoms of syphilis would be developed before the longest known period, between the date of the connection and the date of the appearance of such manifestation, had elapsed. Nothing was seen until yesterday, when I discovered that a syphilitic roseola had appeared.

You may remember that we examined the case critically every week for four weeks, in hopes, if it was to appear, to see this peculiar roseolous eruption which indicates positively the presence of syphilitic infection. The patient was not aware that anything unusual was occurring, except that he felt a slight uneasiness over some parts of the back, and at my visit to the hospital yesterday the lesion was distinctly visible. It is, as you see, now spread quite uniformly over the entire trunk.

At about this time also we look for the characteristic enlargement of lymphatic glands. It is present to some extent, but simply in the neck. We usually find glandular enlargement in the epitrochlear region, but those glands are not yet enlarged to any appreciable extent. We may, however, claim that the disease has become general; that the enlargement of glands will now go on rapidly; and that at the end of a week we shall find enlargement of the epitrochlear glands, so characteristic of constitutional syphilis in its active stage, present to an appreciable degree. You will rarely see a case of syphilitic roseola more characteristic and more marked than this.

The lesion upon the penis has healed entirely, leaving no evidence whatever of disease in that part. This man might have been sent out from the hospital one week ago under the impression that he had had nothing more than a simple sore, not having had any characteristic mark of syphilis, and in other hands been found to be suffering from unmistakable specific disease. Fortunately, however, he was retained, and we have been rewarded for our patient waiting by the appearance of evidence which sustains the suspicion entertained when he was first admitted to the hospital.

SYPHILITIC ROSEOLA.

This so-called syphilitic roseola, in a majority of cases, is developed without constitutional disturbance. In the true sense of the word it is not syphilitic; that is, it is not due to the irritation produced by the *materia morbi* of syphilis. It corresponds with roseola produced by other causes. Wilson describes it as a form of roseola produced by syphilitic material, but in this respect I think he is mistaken. For it comes and goes like any other form of roseola, lasting sometimes for only a few hours, and sometimes for months. In the cases in which it continues for a long time, when it fades out, a copper-colored stain remains, which is considered characteristic of syphilis. When this stain is examined it is found to be caused by the coloring matter of the blood which has exuded into the cellular tissue. This peculiar discoloration of the skin, while it is characteristic of roseola that has existed for a long time, has no meaning which cannot be explained by ordinary causes unconnected with syphilis. It may be asked, why does the roseola of syphilis continue so long, while the other forms of the eruption are so evanescent? A roseola, distinct and well marked, may appear upon the skin of a delicate woman from the mere sense of shame, remain for a few moments and then disappear. Roseola, arising from other causes, may remain longer, but it is comparatively an evanescent eruption.

You will now recall the fact that the *causes* of these varieties of roseola are evanescent. Roseola, produced by taking food not easily digested, disappears as soon as the offending material is removed, and so it is with roseola in general. The effect produced by the syphilitic influence, however, remains continuous for months, and it is not at all wonderful that the roseola dependent upon it should be persistent. The cause in some persons is more abundant than in others, hence the roseola remains longer upon some patients than upon others. It is also uninfluenced by anti-syphilitic treatment. It has been found by some of the later writers, who still regard it as truly syphilitic, that the most satisfactory treatment is by means of tonics, iron, quinine, etc., and that the use of mercury is not followed by any specially beneficial results.

Original Communications.

AN INTERESTING AND UNUSUAL CASE OF OBSTETRICS.

By D. S. KELLOGG, M.D.,

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On the 27th of May, 1878, I was called, in the afternoon, to see a French Canadian woman, aged 37, who had been in labor about twenty hours. This was her ninth confinement. A midwife was with her who could not speak English. The pains were not strong, and the os uteri was so high up as to make it impossible, then, to diagnosticate the presentation. On removal, my hand was covered with a greenish-brown fluid which I thought to be meconium. The midwife, who was strong and powerful, I knew to be in the habit of putting both hands into the vagina and separating its walls with great force, and, also, of using some decoction of herbs "to soften the parts." After a time I became satisfied that it was either a knee or an elbow presentation. I sent for assistance, and Dr. Nichols soon came. By that time there was no difficulty in recognizing the right elbow. On introducing the hand the promontory of the sacrum was found to be very prominent, and although this was readily passed, to our utter amazement, we could find nothing of the child excepting the right upper extremity, and the body from near the neck to a little below the umbilicus. There was a nearly circular band about one-third of the distance from the internal os uteri to the fundus, which band was higher up behind than in front, and which closed down upon the child like a strong belt of leather. The umbilicus was in front and towards the right side of the mother, and accessible. It was impossible to reach the head, neck, left shoulder, lower extremities, the placenta, or even the nates, and the child, undoubtedly, had been dead for some time. External manipulation readily revealed the greater portion of the child above a depression surrounding the uterus. As the woman was strong, we tried, at once, to pass our hand through the constriction, without ether, but to no purpose. We soon sent for an anæsthetic, and for Dr. Lyon, who fully confirmed our diagnosis. When the patient was anæsthetized (chloroform one part and ether three parts being used) the slow process of dilatation was continued. Each one, in turn, until exhausted, gently, but firmly, tried to insinuate his hand into the stricture. After an hour or two we were rewarded by one foot, then presently by the other. Before long everything was brought through the constriction, excepting the head and placenta. The former remained for a while, but at length yielded; the latter we paid no attention to. *Now*, there came on something of a spasm of the internal os uteri. This did not appear until the head had nearly left the constriction above, and did not last long. The whole child was now delivered, excepting the head, which lay with the occiput above the symphysis pubis, with the face in the hollow of the excavation. There it remained and could not be moved. The forceps was applied and locked three or four times, but invariably slipped off over the face. Two fingers were inserted in the mouth, and with the other hand externally over the occiput, and a second person holding the body, rotation was thoroughly tried, but it uniformly failed. The head was next perforated and some fluid escaped, but the muscular contractions of the mother closed the opening immediately. After nearly two hours' hard work, as a last resort, the body was severed from the head. At once there gushed out, from the cranial and spinal cavities, perhaps, twenty ounces of a watery fluid. Dr. Lyon then introduced some scissors, made a longer incision through the cranium, crowded the head up, turned it around with his hand, applied the forceps and withdrew the head in five minutes after it was separated from the body. At this last application of the forceps over thirty ounces of a bloody liquid flowed out from the cranial cavity. The placenta was removed without the slightest difficulty, and with almost no hemorrhage. The woman was given a grain of opium, and directed to take the same quantity every three hours. She took, in all, four doses. It was necessary to use the catheter for three days. The lochial discharge was slight and not at any time offensive. The seventh day after, she sat up long enough to have her bed made; the eighth day, six hours. By measurement, the antero-posterior diameter of the superior strait was found to be a little less than three and one-half inches.

To recapitulate: there were a somewhat deformed pelvis; a powerful, nearly circular constriction of the

body of the uterus, followed by a spasm of the internal os uteri; an arm presentation, and a hydrocephalic child.

Was this constriction an hour-glass contraction?

Our method of procedure may be criticised, but we can only say that we felt justified in removing a dead child, after all ordinary means had failed, in any manner possible not injurious to the mother, and that theories and rules which sound well on paper cannot always be brought into practical use.

TABULATED RESULTS OF THE TREATMENT OF ACUTE ARTICULAR RHEUMATISM BY MEANS OF SALICYLIC ACID AND ITS COMPOUNDS.

By FRANCIS H. MILLER, M.D.,

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ALTHOUGH much has already been said and written concerning the treatment of acute articular rheumatism by means of salicylic acid and its compounds, I have no hesitancy in placing before the profession the following tabulated and statistical evidence of the results of such treatment; for by such evidence, and such only, must a large proportion of all medical practitioners be guided to the introduction of new remedies in their treatment of disease. And as there are still many who are kept from prescribing the remedy, on account of their possessing an insufficient amount of such evidence attesting its special efficacy in this affection, the following observations will, to such, prove interesting.

Of the following cases, two (Nos. 3 and 12) were treated with salicylic acid in ten-grain doses every two hours till one drachm was taken, and this amount to be given daily. Nine (Nos. 4, 5, 6, 13, 14, 15, 16, 19, 20) with Prof. Alonzo Clark's mixture (℞ Ac. salicyl., ʒ iij.; sodæ bicarb., ʒ ij.; glycerinæ, aquæ, ää ℥ ij. M.) ℥ ss. every four hours. Eleven were treated with salicylate of soda, ten grains every two hours till one drachm was taken, and this to be repeated every twenty-four hours. The salicylate of soda appears to be the most efficient mode of administering the remedy, producing very rarely the nausea and vomiting which so frequently follow the use of the uncombined acid or the acid mixture.

In comparing the results of the different modes of treatment of the disease under consideration, the unprejudiced observer will, I think, accord to salicylic acid the first place.

No. of case.	Age and sex.	No. of previous attacks.	No. of days since development of attack.	Pulse and temperature before institution of treatment.	No. of days before temp. and pulse became normal after commencing treatment.	No. of days after institution of treatment to date of discharge.	Remarks.
1	19 male	numerous	5	104 102° F.	5	7	Has cardiac hypertrophy and double systolic and diastolic murmurs.
2	26 male	2	3	108 104° F.	5	18	Kept in hospital seven days or more after complete recovery; had no relapse.
3	37 male	1	21	104 102° F.	4	24	Kept in hospital one week longer than was necessary; no relapse.
4	38 female	4	7	100 101½° F.	3	4	
5	14 male	0	8	114 101° F.	2	7	
6	15 male	unknown	7	112 102° F.	4	5	
7	19 male	numerous	2	98 103° F.	4	6	
8	27 male	3	4	112 103½° F.	3	7	
9	49 male	1	14	120 102½° F.	3	22	Temperature rose, during first 14 days, whenever sal. of soda was stopped.
10	33 male	1	6	not taken	5	20	
11	32 female	2	3	not taken 84	3	7	
12	30 female	numerous	21	100½° F. 90	2	13	
13	29 female	0	8	104° F. 124	3	14	
14	6 female	0	21	102° F. 124	14	27	Was in hospital two weeks after cure was established; no relapse.
15	28 female	1	8	102½° F.	4	38	Associated, when admitted, with pericarditis and meningitis.
16	30 female	1	7	not taken 120	3	7	Was suffering intensely when admitted.
17	22 male	1	3	103° F.	3	7	
18	22 female	1	7	not taken 112	7	13	
19	22 male	0	21	102° F. P. not taken	3	24	
20	25 female	unknown	1	102½° F. P. not taken	3	4	
21	22 female	2	1	102° F. 100	4	..	
22	42	5	21	103° F.	3	6	

Average number of days before P. and T. became normal after commencing treatment, 4.
" " " " discharge from hospital " " " 14.

How it acts, or why it does thus and so, we have yet to learn, and at present must be satisfied with using it, as so many remedies are used, empirically, calling it, if you please, a specific; for its efficacy in the treatment of rheumatism is certainly as great as that of quinia as an antiperiodic, or mercury as an antisyphilitic remedy.

Clinically its effects are prompt and certain, often entirely relieving the intense tenderness and frequently excruciating pain within the twenty-four hours following the administration of the first dose, and reducing the temperature, also the heat, redness and swelling about the joints, in a marked degree, within the same length of time.

The statement that it is of little or no value after the temperature has become normal, needs considerable modification. In a number of cases in which its use was abandoned as soon as the temperature became normal, the articular trouble reappeared immediately, but was again readily brought under control by the readministration of the remedy.

The occurrence of peri- or endocardial inflammations, after the exhibition of the salicylic acid, must be very rare, as none of the cases under observation developed any cardiac lesion during their treatment. Upon this fact the value of salicylic acid in articular rheumatism can safely rest. The observations of Prof. Alonzo Clark show that during the first *five* days of the disease there exists the greatest tendency to the association of these lesions; and as we now have a remedy with which we can fully control the disease within *four* days, we must have a remedy which will greatly lessen the frequency of association with, or complication of peri- or endocarditis with acute articular rheumatism.

As a general apyretic, salicylic acid falls far short of what we were led to believe at the date of its introduction. In a number of patients suffering from acute inflammations (of non-rheumatic origin) coming under my observation, who were treated with salicylic acid to reduce the temperature, its use has resulted in so little benefit, that it had in all cases to be abandoned and the more potent quinia substituted.

Reports of Hospitals.

ST. FRANCIS' HOSPITAL.

SERVICE OF DR. JOSEPH W. HOWE.

STRANGULATED FEMORAL HERNIA TREATED FOR SIX DAYS AS A CASE OF OBSTINATE CONSTIPATION.

M. H., aged forty-two, occupation housekeeper, was admitted February 8th, with a certificate signed "Obstinate Constipation." Ten days previous to her admission she was taken with a severe pain in the right side, accompanied by nausea. Her bowels were constipated. Previous stools were small and light-colored. She applied at —— Dispensary for relief, and was given medicine to move the bowels. They produced little or no effect. Three days subsequently vomiting commenced; there was with it sharp pains in the abdomen, jaundice, and great depression. Was still treated for constipation until admission.

On examination a well-marked hernia was found on the right side, which was painful to the touch and could not be reduced by taxis. The matters vomited consisted principally of fecal matter. Her extremities were cold and clammy. Pulse frequent, feeble, and intermittent.

Patient was anæsthetized and an incision made through the coverings in the long axis of the protrusion. The knuckle of intestine was about the size of a walnut, very dense, and had one small spot of gangrene the size of a pea at the extreme end. The stricture was at Gimbernat's ligament, and was readily divided.

Death occurred twenty-fours hour after operation.

STRANGULATED HERNIA REDUCED EN MASSE.

J. S., æt. seventeen, was admitted to the hospital January 31st. Seven years previously he was accidentally trodden upon by his mother. Shortly afterward a swelling appeared in the right groin; it gave him very little trouble until January 29th. While lifting some heavy weights on the morning of that day he felt a severe pain at the seat of rupture, and the tumor grew larger. Vomiting and violent pain in the abdomen supervened, which increased in severity every hour. In the evening a physician was called in, who attempted reduction of the hernia by taxis. He was apparently successful, but no diminution of pain or vomiting followed the treatment. The patient grew rapidly worse, and the next evening was admitted to the hospital.

At first sight it seemed as if the hernia had been reduced, for the swelling over the inguinal canal was very small. On palpation, however, it was found to be of considerable size, and so deeply situated that the neck of the sac could not be made out. The patient was anæsthetized and an incision made over the inguinal canal and the gut exposed. It was then found that the constriction was almost a finger's length from the upper part of the inguinal canal, and situated within the abdominal walls; that the taxis previously mentioned had separated the sac and the hernia and its constricted neck from the inguinal ring, pushed it upward and backward under the walls. After considerable difficulty the stricture was reached and cut, and the intestine replaced. The incision was closed by sutures, an ice-bag placed over the lower portion of the abdomen, including the wound. Ten grains of quinine were given by the mouth and fifteen minims of "Magendie" hypodermically. Morphine, quinine, and ice were continued for one week; then the bowels were moved by enema, and simple water-compresses applied over the wound. When the wound was entirely healed, an *air-truss*, devised by Dr. Howe, was placed over the internal ring to support the parts until the new tissues had become firm. Patient left the hospital in good health.

EXTRAVASATION OF URINE BEHIND AN OLD STRICTURE.

This patient was forty years old, worked as a cook, and dated his illness twenty years back. He contracted gonorrhœa at that time, and was troubled with stricture ever since. Ten years ago he had retention, which was relieved with difficulty. Three weeks previous to admission he had great difficulty in emptying his bladder. With great straining he was able to get out enough water to relieve the irritation. Eighteen days of this difficult and painful micturition culminated in complete retention, intense pain over the bladder and perineum, and swelling of the genitals. Chills and rigors soon followed. He came to the hospital three days after the commencement of the retention. We found the perineum, scrotum, penis, and lower portion of abdominal walls distended with urine, and very painful on pressure. A few drops of urine and pus could be squeezed from the meatus

which latter opened on the under surface of the glans (hypospadias). Patient was bathed in profuse perspiration. Pulse was rapid and feeble, face anxious, and general condition was very bad.

Ether was administered, and attempts made to pass small sounds and filiform bougies, but without success. They were all stopped two inches and a half from the meatus. An incision was then made in the median line through the perineum, down to and through the urethra at the point of obstruction. A free flow of urine mixed with pus followed the incision. Ligatures were then passed through the mucous membrane of the urethra, held by an assistant on each side, and the walls kept apart by them. The stricture was very tight, and one side was torn at its lower part. After cutting this, the incision was carried on down to the bladder, and a large quantity of ammoniacal urine drawn off. Free incisions were also made in the scrotum, penis, and abdominal walls, from which considerable pus and fetid urine came. The wounds were washed with a carbolic solution, charcoal poultices applied, and quinine and morphine given internally.

Next morning patient felt much relieved, but his temperature was 105, and pulse 130. Under fifteen-grain doses of quinine it soon came down to 102, and on the fourth day after the operation temperature was 101. and pulse 110. Recovery took place slowly on account of the formation of small abscesses in different portions of the perineum and abdomen. Four weeks after operation urine passed through the penis, and two months from the time of the operation he was discharged cured, with the exception of a hard lump at the lower portion of the scrotum, which seemed as if it might at some future time soften down and form another abscess.

COOK COUNTY HOSPITAL, CHICAGO.

(Reported for THE MEDICAL RECORD.)

CANCER OF OVARIES AND PERITONEUM.

AMANDA S., colored, æt. about 65, had always enjoyed good health till about one year ago. She had borne several children and had always worked hard. About one year ago she began to have slight abdominal pains (low down), especially on partaking of a hearty meal. In six months she began to lose her appetite and would vomit occasionally. She also had some pains about her feet that appeared to be rheumatic. Late in the fall, just when, the patient was unable to say, her abdomen began to swell. She was not certain that the enlargement at its beginning was circumscribed in any part of the abdominal cavity.

She was admitted to the hospital in the latter part of February. At that time the abdominal enlargement was so considerable that serious dyspnœa was produced. The fluid character of the enlargement was easily established. The appetite was poor, the bowels regular, and slight general abdominal pains were complained of. The urine was normal. She was tapped March 13th, and a large quantity of a dirty brownish-red fluid was withdrawn. The fluid was rapidly reproduced, and the tapping was repeated April 16th, May 8th and 24th, and June 3d. The largest quantity withdrawn at any one tapping was two and one-half gallons; the smallest perhaps half that quantity. The fluid did not change in character with the successive tappings. It was highly albuminous, contained an abundance of red blood-corpuscles, a few leucocytes, some small cells of pavement epithelium, an abundance of granules and granular cells of all sizes and all degrees of granular infiltration. Many of these were pronounced by Dr. I. N. Danforth to be the cells of Drysdale, that have been supposed to be characteristic of the fluid of ovarian cysts.

After the evacuation of the fluid there were discovered by palpation several small nodular masses above and about the uterus, making altogether a mass not larger than the doubled fist. The uterus was pressed down upon the floor of the pelvis before the withdrawal of the fluid—less so after its evacuation; it was only very slightly movable, and its cavity was but about three inches in depth and was in the normal position. The patient died of exhaustion June 9th.

On *post-mortem* examination the peritoneal surface was everywhere dotted with little tumors of encephaloid cancer. They varied in size from that of a wheat kernel to that of a pigeon's egg. There must have been a thousand of them. Both ovaries were enlarged, each to the size of a hen's egg, and were in a condition of cancerous degeneration. There were several small cysts connected with the left ovary, no one being larger than two inches in diameter. Several cancerous masses were found connected with the fundus uteri; these were larger in size than most of those found upon the general peritoneal surface. Uterus, ovaries, bladder, intestines, and cancerous masses were bound together in a mass by what was evidently inflammatory exudation.

This case acquires its chief interest from the microscopic appearances of the ascitic fluid. The granular cell appears to be unreliable as an appearance diagnostic of ovarian cysts.

MALIGNANT TUMOR OF BREAST.

Ida K., a housewife, æt. 38, German, was admitted to the hospital, January 10, 1878. She had borne several children, the last of which was a baby a little over a year old. This child she had nursed till three weeks previous to her admission. She had through life enjoyed unusually good health. She stated that eight months previously she had, while lifting a heavy wash-tub, accidentally struck her left breast against the side of it, which caused some pain. She caught cold in the breast soon after, as she believed, and as a result a slight swelling occurred just above the nipple, that gave to the feel an impression of a tumor in the tissue of the mammary gland as large as a pigeon's egg. This was, to a very moderate degree, tender to the touch; it caused a slight blush of redness of the skin and it remained of the size mentioned until two months after the accident, when it began to increase in size, but slowly. It did not interfere with the free flow of milk from the breast, and she continued to nurse the child from this breast equally with the other.

Three weeks previous to admission she weaned her baby, and suddenly—the very next day—the breast began to increase very rapidly in size and uniformly over the whole mammary region. She also began to experience sharp lancinating pains in the part.

On admission the whole left breast was found enormously and uniformly enlarged and quite hard. It was of a dark purplish color, especially about the nipple, and would easily pit slightly on firm and sustained pressure. There were slight pains frequently experienced in the part, and the patient complained of its weight. The tumefaction extended beyond the breast and reached an inch or more above the mammary region, as far below it, and several inches to the left upon the surface of the thorax. In all these lo-

calities it presented itself as a hard, œdematous swelling, resembling the thickening of an erysipelas, but wholly without its redness and inflammation. The tumefaction did not extend to the right upon the sternum. The nipple was not retracted in the least. The exploring needle brought only milk and serum. One week from the date of admission the tumefaction had greatly increased in degree and had extended laterally nearly to the angles of the ribs, while it had advanced slightly upward and downward.

A week later she left the hospital. The sudden explosion of the swelling, its extension beyond the mammary region in so marked a manner, and its occurrence coincidently with the cessation of nursing, made this a case of peculiar interest. It was at first supposed that probably the sudden enlargement had been due to the occurrence referred to.

Word was brought to the hospital that a few days after her discharge the breast broke down in an enormous slough. She died March 4th, of exhaustion, general anasarca having supervened.

BILATERAL LACERATION OF THE OS UTERI, EVERSION AND ULCERATION—OPERATION—RECOVERY.

Mrs. S., German, æt. 30, was admitted to the hospital in November, 1877. She had, until one year before, enjoyed good health. She had menstruated at seventeen years of age, was married at twenty, had borne five children at term and had two still-births. One year before admission pain began to be manifested in the top of the head and back to the degree of producing great annoyance, and the menstruation came every two weeks. During the last few months the frequency had not been so great, and she had suffered less, but was not well.

She was found to have bilateral laceration of the os and cervix uteri, the posterior lip was everted to a marked degree, exposing a considerable surface of the cervical canal. Some superficial ulceration appeared upon the os and about the everted surface. The whole os and cervix were considerably swollen.

She was treated by Dr. T. D. Fitch, for seven weeks, with tampons of cotton saturated with glycerine, one being introduced every two or three days, and applications to the eroded surface once a week of a saturated solution of iodine in creosote. She also took tonics most of the time. At the end of this time there was noted a great improvement in the ulceration of the os and in the enlargement of the os and cervix. Accordingly, on January 3d, with the patient under the influence of ether, Prof. Fitch "denuded the lips of the cervix and brought them together with silver sutures, four on the right and three on the left side. The sound was passed and the canal found pervious."

The after-treatment consisted in washing out the vagina daily with tepid water.

In two days symptoms of erysipelas showed themselves. A slight erysipelatous patch appeared on the right cheek, and there was restlessness, with fever, and pains in the head (not in the uterus). She was given tincture of iron and quinine, and these symptoms disappeared in three or four days. The sutures were removed on the eighth day after the operation. The success of the operation was almost complete—the denuded surfaces having united firmly except at one point, where, near the surface, a small ulcer point was left unclosed. This spot healed in a few days with the aid of two applications of the solid nitrate of silver. The patient was discharged well February 1st.

Progress of Medical Science.

PROVISIONAL REPORT UPON THE USE OF DEFIBRINATED BLOOD FOR RECTAL ALIMENTATION.—At a recent meeting of the Therapeutical Society the committee reported, through Dr. A. H. Smith, that some progress had been made upon this subject, furnishing material embracing two experiments and six cases. In the first experiment, of which the second was merely a repetition, nine ounces of defibrinated bullock's blood were injected into the rectum at 11 P.M., the bowel having previously been cleansed by an enema.

At 8 A.M. of the following day the contents of the rectum were voided, and consisted of less than two ounces of a semi-solid substance resembling currant-jam. When this was examined under the microscope it was shown to contain a large proportion of fæcal matter and granular detritus, but scarcely a blood-corpuscle was to be recognized. In a case, the history of which was furnished by Dr. A. Hadden, the patient, suffering from cancer of the stomach, was nourished exclusively by the rectum for fifty-four days. During one week of this time the injections consisted of defibrinated bullock's blood, with occasionally a little brandy and milk. The blood answered completely the purpose for which it was employed, but the family objected to its use on account of the extreme fetor of the dejections. This was the only case in which this condition was observed. In another case it was calculated that of twenty-four ounces of blood administered daily, more than sixteen ounces were absorbed. The injections were usually retained well, in one case forty-eight hours. The committee state that defibrinated blood will be delivered at patients' houses by D. Harrington & Co., First Avenue and 43d Street, and by D. Blakeman, Manhattan Abattoir, foot of West 34th Street. If kept from the air and in a cool place it remains fresh for two days.—*N. Y. Med. Jour.*, July, 1878.

CHOLECYSTOTOMY — A NEW OPERATION.—Dr. J. Marion Sims has again the credit for introducing what appears to be an entirely new operation for the relief of a difficulty that is very hazardous to life, if not necessarily fatal (see Lect. by Prof. A. Clark. MED. RECORD, Aug. 3, 1878). The outline of the case is as follows:

An American lady of 45, who had been in perfect health for many years, began to have pain in the right hypochondrium last summer. In the autumn she became jaundiced, and a little later a swelling was noticed about the lower border of the liver. In January she began having discharges of blood from the rectum, which continued from various parts of the body during the whole period of her illness. Soon after the jaundice set in her whole body began to "itch and burn," and the suffering from these sensations prevented her from sleeping. Then great hyperæsthesia of the skin was developed, and there was "goose-flesh" roughness occasionally, with a sense of internal chilliness. No medication gave relief. The stools were clay-colored, except when bloody, and their odor was offensive. In February the urine had become scanty and bile-colored; the tumor increasing gradually in size. Dr. Sims advised aspiration, which was done, and thirty-two ounces of a dark-brown fluid evacuated. The operation was followed by favorable results. She slept all night, and had no itching or burning. There was no vomit-

ing, and pulse and temperature were normal. Still the urine was scanty. Two days later the old symptoms returned. When seen again about a month after the aspiration the tumor was now nearly as large as before. Regarding the case as hopeless, it was decided to cut down on the tumor, then empty its contents, and if it proved to be the gall-bladder, to attach its edges to the abdominal incision. Encouragement in the operation was gained by the fact that the aspiration gave relief, and the operation itself would simply be an imitation of the efforts of nature, in similar cases where recovery had taken place. Accordingly on April 18th "an incision three inches long, parallel with the linea alba," was made over the most prominent part of the tumor, about three inches to the right of the umbilicus. The incision commenced about an inch above the level of the umbilicus. When the peritoneum was opened, several ounces of pinkish serum were discharged. Puncturing the tumor with a Dieulafoy's trocar, twenty-four ounces of fluid were withdrawn. The cyst having been emptied, it was hooked up with a tenaculum and drawn out through the wound. Finding it to be the distended gall-bladder, it was cleansed, and sixty gall-stones removed. A portion of the sac was then excised, and the margins of the remainder sewed to the walls of the abdominal incision.

The whole operation was done with antiseptic precautions. On the day following the operation, the patient was free from pain and fever; she had slept, and had no nausea or vomiting. The urine had increased to twenty-five ounces in the twenty-four hours, and the stools even became natural. On the third day the wound was dressed under the carbolic-acid spray, and it was found to have healed entirely, but the urine had diminished in amount. On the fourth day the urine had increased in amount. On the sixth day the discharge from the wound was mixed with blood, which also exuded from the gums. This continued on the seventh day, when ergot and dialyzed iron were given, but without amelioration of the symptoms. On the eighth day she commenced to have "black vomit," such as occurs in yellow fever. She died eight days and six hours after the operation. At the autopsy, done by M. Ganal, there was no evidence of peritonitis, but in the gall-bladder were sixteen sacculated gall-stones. The gall-ducts of the liver were much dilated, as could be seen by the naked eye. After removal of the gall-bladder a probe could be passed through the ductus communis. The vomited matter submitted to M. Ranvier proved to contain in large part blood. The liquid in the distended sac did not contain bile, as is not infrequently the case. The lesson taught by this case, as summed up by the author, is: "In dropsy of the gall-bladder, in hydatid tumors of the liver, in suspected abscess of the liver, and in gall-stones, we should not wait till the patient's strength is exhausted, or till the blood becomes bile-poisoned, producing hemorrhages, but we should make an early exploratory incision, ascertain the true nature of the disease, and then carry out the surgical treatment that the necessities of the case may demand." —*British Med. Journal*, June 8, 1878.

CHANGES IN THE URINE IN PARALYSIS AGITANS.—Dr. Chéron believes that the appearance of the tremor in Parkinson's disease is preceded by a long prodromal period, marked by changes in the urine and by progressive loss of strength. The violent moral impressions, exposure to damp, cold, etc., which have hitherto been regarded as the primary causes of the disease, are, in his opinion, only accessory causes, that determine the immediate outbreak of the affection, for which a profound nervous exhaustion has long been preparing the ground. All the intelligent patients who have come under his observation, eight in all, gave a history of general, progressive exhaustion, and of the passage of clouded urine for years before the tremor set in. In all of these cases the urine was carefully examined, and in all it presented the same characters. In two of them, which remained for a long time under his charge, the urine was examined regularly twice a week. The results of all these examinations show that the urine in Parkinson's disease is very abundant, sometimes double the usual quantity, and that the excretion of phosphates is increased, the quantity of phosphoric acid being often three times greater than normal, but that the increase of the sulphates is insignificant. This last fact is striking when we take into consideration the constant tremor and the fact that the sulphates are the results of muscular waste, but it is readily explained by the total absence of fever. Taking the principal constituents of the urine in order, Dr. Chéron found the urea normal or presenting only an apparent augmentation which was in keeping with the polyuria; the chloride of soda was normal; the sulphuric acid was rather below than above the normal average, except during a few brief intervals in one of the cases when the patient was obliged to do some fatiguing muscular work; the phosphates were greatly increased, the increase appearing at a time considerably anterior to the outbreak of the disease, and disappearing in the two cases that remained under treatment, *pari passu* with the general improvement.

In one of these two cases the water of the urine was double, and the phosphates treble the normal quantity, the other elements remaining at the ordinary figure. The tremor had appeared after a violent emotion, but the loss of strength and the cloudy urine had been noticed for over ten years previously. Under treatment by galvanism the quantity of the urine, and of the phosphates it contained, progressively diminished and finally got below the normal point; the frequent desire to urinate, the painful sensation of internal rolling and trembling, the articular pains and the muscular stiffness disappeared, the expression of hebetude diminished, walking became easier, and the mental activity increased. The patient can now read, talk, and sleep well, and can sit long at table. The tremor of the limbs has diminished and is no longer transmitted to the trunk.

In the other case the progressive exhaustion and abundant cloudy urine preceded the tremor by thirteen years. The changes in the urine were the same as in the preceding case. This case was treated by strychnine, bitter tonics, and preparations of phosphorus; the results obtained were favorable, but they were not so decided as in the case treated by galvanism, the quantity of phosphoric acid excreted always remaining considerably above the normal average.—*Le Progrès Médicale*, Dec. 1, 1877.

ENDARTERITIS.—Under the direction of Prof. Köster, Dr. Trompetter has made a minute study of the process of endarteritis, and has arrived at the following results: The initial process in endarteritis is not a proliferation of the tissue, but an hypertrophy of the pre-existing elements, the cells as well as the intercellular substances. Further, a dilatation of the plasmatic channels (saftkanälchen) takes place. The existence of these channels can be positively demonstrated in the inflamed intima, and it is very probable that they also exist under normal conditions. A pri-

mary growth of the intima cells, according to Dr. Trompetter, cannot positively be demonstrated. An infiltration with lymph-cells is also never a primary process; it is always consecutive to the changes that lead to hypertrophy. Every endarteritis corresponds to a chronic inflammatory process in the muscularis, or in that and the adventitia together. The endarteritis does not precede, but follows the mes- or periarteritis; in the later stages the endarteritic thickenings may undergo vascularization, the newly formed vessels being derived from the vasa vasorum. The regressive processes in the endarteritic thickenings are in all probability due to endarteritis or arteritis of the arteriolæ nutritiæ themselves.

Dr. Trompetter insists particularly on the point that the endarteritis is accompanied and even preceded by a corresponding mesarteritis, from the anatomical relations of which it is evident that it is an inflammation starting from the vasa nutritia. The endarteritis is developed in isolated patches, and these correspond to the diseased vascular territories. He explains the sequence of the process in the following manner: A chronic irritation affects the vasa vasorum, in consequence of which a chronic inflammation is developed around them. As a result of the hyperæmia, these parts of the intima, which are nourished by the diseased vessels, are more abundantly supplied with plasma and undergo hypertrophy. Later on lymph-corpuscles make their way into the intima, and finally when the mesarteritic inflammation has reached or perforated the membrana fenestrata, vessels grow into the intima. Hence the abundant plexus of lymphatic vessels, demonstrated by Köster in the muscularis of the arteries, plays an important rôle in the explanation of endarteritis. As a result of the chronic inflammation, a number of the lymphatic vessels are obliterated, and as a necessary consequence the lymph accumulates, dilates the plasmatic channels, and causes hypertrophy, this dilatation and hypertrophy being really the only phenomena in the first stages of endarteritis.—*Allg. Med. Cent. Zeit.*, Dec. 22, 1877.

Dislocation of Muscles or Tendons, and their Treatment.—Mr. Callender, of London, has directed attention to a class of surgical injuries that are often of great annoyance and pain to the sufferer, but of which we find little record in the experience of surgeons. Probably of all tendons that are luxated, the most common is the biceps, and next the quadriceps extensor, as in displacement of the patella. Then it is by no means rare to have the leaders about the wrist thrown out. In this latter case as in others, to insure absolute recovery, the reduction must be made within a few weeks, and the parts kept at rest for a month. The peronei may also be slipped from behind the malleoli or (not a rare accident) some one of the muscles of the back may be thrown out of relation to its fellows. An interesting instance is given in which a gentleman dislocated his pronator radii teres while playing lawn tennis. In making a back stroke the forearm was thrown into the extreme of pronation. The difficulty was recognized from the seat of pain, and the distress when the hand was moved in pronation. Pronation, however, was persisted in by the surgeon, and then extreme supination, while at the same time the hand, armed with a large pad, pressed firmly upon the muscle so as to force it into place. "If," says Mr. Callender, "you come across a case in which sudden or unusual movements of the body have been followed by pain—local in its character—made worse by certain movements, or presenting certain movements, and especially if such pain be referred to the site of muscular digitations about the spine, or to that of comparatively slender muscles, as in the forearm, it is at least worth your while to try the simple measures which we may use for reducing the dislocation of a muscle: First, guided by the pain, decide as to the muscle or digitation of a muscle probably the seat of the trouble. Secondly, relax the muscle so far as you can. Thirdly, by firm manipulation, such as by rubbing with the hand, or by kneading with the thumb, endeavor to replace it. Fourthly, if this fail, make pressure over the part whilst you bring the muscle to action and put it on the stretch; and if the less painful measures have failed, this is almost sure to bring the muscle into position."—*British Med. Journal*, July 13, 1878.

Treatment of Ascites by Abdominal Compression.—Dr. Stephen Mackenzie has found compression of the abdomen to be a valuable agent in the treatment of the ascites dependent upon contraction of the liver. The compression accelerates the resorption of the fluid, when this has been initiated by other methods of treatment, such as purgation, diuresis, etc.; more than this, it seems to possess the power of exciting absorption without the intervention of other treatment. Dr. Mackenzie records the case of a woman who had suffered for a long time from ascites; she was much emaciated, and had œdema of the legs. After some preliminary treatment a flannel bandage was tightly applied to the abdomen; the pressure at first caused a feeling of sickness, but after a time the bandage ceased to cause discomfort, and appeared to afford relief. It was soon replaced by an elastic abdominal supporter, which was so made that it could be tightened to a considerable degree. The ascites gradually disappeared, and it has not returned, although nearly three years have elapsed since the patient was discharged from the hospital. In a second case the treatment was equally successful, although no internal remedies were used in connection with it. Dr. Mackenzie believes that, in spite of the abnormal condition of the liver in these cases, the recovery may be regarded as perfect, since the portions of the organ that remained healthy were sufficient to perform its necessary work. The secondary derangements, due to the mechanical obstruction to the circulation in the liver, were relieved by the diversion of the blood into other channels. The effused fluid is removed from the body through the kidneys, and hence it is essential for the success of the treatment that these organs should be healthy.—*British Med. Jour.*, April 20, 1878.

Treatment of Albuminuria by Fuchsine and Rosaniline.—Feltz and Bouchut have treated a small number of patients suffering from albuminuria with fuchsine and rosaniline, given in pills and mixture, in doses of three grains per diem. Under this treatment the albumen soon disappeared from the urine. They claim that these therapeutic trials prove at all events that both these coloring agents are well borne by the organism, and are relatively harmless.—*Deutsche Med. Wochen.*, No. 24.

Oil of Aleurites Triloba as a Cathartic.—Dr. Oxamendi esteems the oil obtained from the aleurites triloba, known in Ceylon under the name of kekune oil, as the best substitute for castor oil. It has a pleasant taste like that of hazel-nut oil, and causes no unpleasant effects. Half an ounce is the dose for an adult; it operates in about three hours without causing pain or colic.—*Allg. Med. Cent. Zeit.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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THE YELLOW FEVER SCOURGE.

THERE is no doubt now that the terrible visitation we are now having is the most severe that has fallen upon us for many years, and its rapid increase and fearful intensity make the outlook for some of our Southern cities gloomy and sad indeed. According to the bulletin of the Surgeon-General's office, the disease had begun to assume an epidemic character in Havana during the early part of July, when there were some thirty deaths weekly, while at Matanzas and Key West it had appeared in a mild form. In the second week of the month the deaths at Havana had reached ninety-seven, but our great Southern ports had escaped. This was not to last long. About the 12th the first cases were reported at New Orleans, and spreading along the river towns of the Mississippi and its tributaries, or by the great rail lines, had reached Vicksburg, Memphis, Grenada, some inland towns, and even Cairo, Cincinnati, and Pittsburg.

Notwithstanding that rigorous efforts are reported to have been attempted in New Orleans, the disease could not be limited to the original focus of infection, but increased with terrible fatality, so that under date of August 25th there had been 2,029 cases with 610 deaths. According to the official reports in this issue, it will be seen that for the week ending August 24th, at noon, there had been 771 cases with 295 deaths in New Orleans, a greater mortality than in all the previous weeks combined. The disease had also assumed an alarmingly epidemic form at Port Gibson and Canton, and had reached Morgan City and Ocean Springs, Mississippi; while isolated cases were appearing at cities of the Southwest that had not as yet been visited. There seems to be nothing specially new in this particular scourge. Its method of advent, course, and fatality, are all known to us, and also its method of prevention, and yet it seems to have gone on for the most part unchecked by the precautionary measures that are known to enlightened civilization. Whatever may be the theory as to the nature of the poison, we do certainly know the peculiar way in which it is transmitted, and the special soil which it requires for multiplication. If the reports are correct, however, there seems to have been no proper effort made to hem it in, and no timely precautions taken to prevent its obtaining a proper root. In New Orleans we are told that parts of the city which furnished aliment for the disease in 1853 are in 1878 in just as filthy a condition, if not more so. Houses seem to have been adapted to keep out the fresh air and to receive the foul emanations from the sinks, and garbage and offal in the back yards and alley-ways. The same picture is repeated in all the towns visited by the fatal plague. The history of the desolate and panic-stricken Grenada is a good though terrible example, which may be useful if it enforces a lesson that will be remembered.

This little town had long been noted for its beauty and comparative healthfulness. Situated in the northern part of the State of Mississippi, midway between Jackson and Memphis, over seventy miles distant from the great river, one would hardly have thought from its natural advantages that it would have been selected to bear a special visitation. In fact, until this year it had wholly escaped, and was only plagued by the malarial annoyances that belong to the Mississippi Valley. The little group of houses comprising the town of 2,200 inhabitants lies upon the Yalabusha river, a narrow, sluggish stream that empties into the Yazoo about twenty-five miles lower down, this latter river joining the Mississippi at Vicksburg. All of the buildings, with single exceptions, are gathered upon a few unpaved streets and may be compassed within a half square mile. The point of interest, however, is the town drain or sewer. This appears to be an ordinary ditch, only a few feet deep, running from the hill to the river, covered in places by logs and planks with a layer of earth, but often entirely open. It collects the drainage of stables, cesspools, and probably of privies. Not uncommonly the hogs, which appear to be the natural scavengers of the place, found their way into its convenient openings, and failing in their efforts to get out again, died, leaving their carcases to rot and pollute the air.

As some complaint was made to the Mayor in July, men were employed to clean it, and they found, it is said, the bodies of several of these animals. As the bottom of the ditch was uneven, pools of filth formed at intervals. About July 12th (when the first cases were reported in New Orleans), a dressmaker was taken sick with a disease that was pronounced to be malarial fever, of which she died July 25th. Immediately before the attack she had received a dress from New Orleans, and several passengers from that city had put up at the Walthall House, close by. So much for the origin of the disease, which would appear to have originated in New Orleans and Grenada at about the

same time, and, in the absence of any explanation, would imply that, if the disease was imported, we may look for a third point, possibly Cuba, as the source from which it came. More important far, however, than this question, is that of the drain. The dressmaker lived very near it and the spot where it had been uncovered by the workmen. When the disease became epidemic, as it did a month later, it was observed that the cases were scattered thickly along the line of the drain, and the nearer to it the more fatal they were. This sketch of a Mississippi town is said not to be exceptional. All sorts of refuse is thrown into the streets or into the back yards and alleys, making the very conditions that are known to favor the outbreak of an epidemic.

Such an exhibit is the strongest argument we can offer to enforce both the necessity of having State Boards of Health and of having them realities, not in name, but in deed. If they were in existence in all our States, and in thorough working order, we might fairly expect that such epidemics as this one could never again occur. With every town properly guarded by sanitary officers, there could have been no such sacrifice of life; and if one or more towns did chance to be derelict in their duties, the State sanitary authorities could have taken them in charge, established local quarantines, and at least prevented the extension of an epidemic to their more orderly neighbors. Such, however, is not the case; and in the absence of it we earnestly recommend to the perusal of all physicians or local authorities in suspected or infected localities Surgeon-General Woodworth's circular to the officers of the Marine Hospital Service, as contained in our last issue. The views that he expresses have of course no "official force," but they are timely, well conceived, and should be regarded as a praiseworthy effort on the part of a government officer to disseminate very needful information in a time of great trial and peril.

It is understood that the medical officers of the marine service are restricted in their duties to external quarantine,—that is, to inspection and regulation of vessels coming into port from without. In all matters relating to internal or land quarantine and the health of cities they are "required to assist the local health authorities in all proper and practicable ways when requested to do so." Though it would thus appear that, under the provisions of the National Quarantine Act, the separation of the government from the local authorities is very clear, and the intervention of the former would only be by request, it may fairly be questioned whether, in the absence of any properly constituted local sanitary authorities, the government should not interfere in behalf of the whole country, which is thus put in imminent danger. If such were the case, we should not see in the official bulletin that the "steamer John A. Porter, from New Orleans, had four deaths from yellow fever before arriving at Cincinnati, *which city she passed on Friday bound for Pittsburg, with several cases on board*," or that "the steamer Golden Rule passed Cairo yesterday evening for Cincinnati, with two cases of yellow fever on board. *Two deaths occurred on board that vessel Thursday.*"

However wise it may be on the part of government not to intermeddle in these matters, we cannot fail to see that the absence of some strong hand, which is powerful enough to make and establish a land quarantine, is marked by a terrible sacrifice of life.

Much, however, may be done by each individual in an exposed locality. Absolute cleanliness should be maintained both in his person and surroundings; excesses of all kinds should be avoided; and not improbably prophylactics, such as the sulphate of quinine, iron, and chlorate of potassa, recommended by the Surgeon-General, may be employed with advantage. Further, as the disease appears to enter through the air-passages, disinfecting solutions may be applied in the form of sprays or the like. Fortunately we may comfort ourselves that there is little to fear from the unwelcome guest in our city. Yellow fever has, of late years, never taken any hold in this vicinity. Isolated cases may occur; but, with the prompt action of our Board of Health, and the presence of cool weather, we may regard ourselves as fairly out of danger's way.

THE MEDICAL STAFF OF THE ARMY.

We receive from time to time so many inquiries regarding examinations for the army, that we are happy to state that an Army Medical Board will meet in this city during the months of October and November. There are eleven vacancies in the corps. For the information of those who may desire admission as assistant surgeons we publish the following conditions:

All candidates for appointment in the Medical Corps must apply to the Hon. Secretary of War for an invitation to appear before the Medical Examining Board. The application must be in the handwriting of the candidate, stating age and birthplace, and be accompanied by testimonials from professors of the college in which he graduated, or from other physicians in good repute. Candidates must be between twenty-one and twenty-eight years of age, and graduates of a medical college, having a thorough and complete course of medical education—evidence of which must be submitted to the Board before examination. The morals, habits, physical and mental qualifications and general aptitude for the service of each candidate will be subjects for careful examination by the Board, and a favorable report will not be made in any case in which there is a reasonable doubt.

The following will be the general plan of the examination:

I. A short essay, either autobiographical or upon some professional subject—to be indicated by the

Board. II. Physical examination. This will be rigid, and each candidate will, in addition, be required to certify "*that he labors under no mental or physical infirmity, nor disability of any kind, which can in any way interfere with the most efficient discharge of his duties in any climate.*" III. Oral examination on subjects of preliminary education, general literature, and general science. The candidate must satisfy the Board in this examination that he possesses a thorough knowledge of the branches taught in the primary schools, and a failure to show this will end his examination. Oral examination on scientific subjects will include chemistry and natural philosophy; and that on literary subjects will include English literature, history of the United States, and general history—ancient and modern. Candidates possessing a knowledge of the higher mathematics, the ancient and modern languages, will be examined therein, and due credit given for a proficiency in any or all of these subjects. IV. Written examination on anatomy, physiology, surgery, practice of medicine and general pathology, obstetrics, and diseases of women and children. Oral examination on these subjects, and also on medical jurisprudence, materia medica, therapeutics, pharmacy, toxicology, and hygiene. Few candidates pay the attention to hygiene which it deserves; it is made an important subject in this examination. V. Clinical examination, medical and surgical, at a hospital. VI. Performance of surgical operations on the cadaver.

The Board will deviate from this general plan whenever necessary, in such manner as they deem best to secure the interests of the service. It will report the merits of the candidates in the several branches of the examination, and their relative merit in the whole, according to which the approved candidates will receive appointments to existing vacancies, or to vacancies which may occur within two years thereafter. An applicant failing one examination may be allowed a second after one year, but not a third. No allowance will be made for the expenses of persons undergoing examination, as this is an indispensable prerequisite to appointment, but those who are approved and receive appointments will be entitled to transportation on obeying their first order.

It is unnecessary to say that the pay as Assistant Surgeon in the Army is much greater than any income which the young practitioner can reasonably command for the first few years of his career in civil practice. Not only from a professional, but from a pecuniary point of view, the Army should have a sufficient attraction for the hosts of young strugglers to more than fill the present vacancies with first-class talent.

We have such a high opinion of the professional requirements for admission to the medical corps, that we consider a successful examination a high honor to any young medical man, and have made it a rule to publish his name and grade accordingly.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS.

Stated Meeting, June 17, 1878.

DR. SALVATORE CARO, CHAIRMAN.

SORE NIPPLES.

DR. F. V. WHITE directed the attention of the Section to his method of treating sore nipples. He received the idea from a patient. He had had between one and three thousand cases of confinement, consequently an extended experience in the management of that difficulty. He had resorted to almost every method of treatment, embracing the various local applications which had been recommended, but without satisfactory results. During the last eight or ten years he had employed the method suggested by his patient, and had come to regard it as specific, for, with only one or two exceptions, the plan of management, in his hands, had been uniformly successful. The plan was to simply protect the nipple with an ordinary nipple-glass, such as was worn to protect the nipples from the clothing. It could be secured in position by means of a bandage. The pressure of the glass upon the breast removed more or less of milk, which became a serviceable lotion for the sore nipple.

DR. HUBBARD remarked that he had employed the nipple-glass for several years to protect the breast from the clothing, but he had never used it for the cure of sore nipples. He had used it more as a protector against irritation. He had not, however, always succeeded in curing the nipple while using the glass. He had frequently questioned whether keeping the nipple constantly moist with milk was not injurious rather than beneficial.

DR. A. C. POST suggested that when the nipple-glass was employed, the hole should be so large that the nipple would not be at all dragged upon; the drawing should be from the breast, and not from the nipple.

DR. S. S. PURPLE remarked that when the nipples were simply sore, without excoriation, he had managed them successfully by making a local application of

℞. Tannin..... ʒ i.
Syr. acacia..... ʒ iij.
Aquæ..... ℥ ij.
M.

It could be applied to the nipple and breast with the finger, and should remain exposed to the air until perfectly dry. The glass could then be worn over the nipple to protect it from the clothing, and he usually had no trouble in the management of the case.

DR. E. F. WARD said that local applications, such as nitrate of lead, tannin, etc., had, in his hands, been rather disappointing in the treatment of sore nipples. For several years he had not used any local application to the breast or nipple, but had directed the woman to use a nursing-tube, consisting essentially of a glass shield with a broad brim, and an opening sufficiently large to admit the nipple without constriction, and a rubber tube with a mouth-piece attached. The glass shown by Dr. White he also used to protect the parts from the clothing, but had not used it to cure the nipples. He had experienced little or no difficulty in managing his cases successfully.

Dr. O'Sullivan had not for many years used local applications in the treatment of sore nipples. His method of treatment had been to keep the nipple perfectly at rest, never allowing the child to nurse unless the nipple was protected. He had used the nipple-glass as a protector from irritation.

Dr. Kennedy thought the nipple-glass did nothing more than protect the breast from irritation produced by the clothes. So far as treatment of the sore nipple was concerned, he usually left it to the experience of a physician or to the experience of the nurse, however poor that might be.

Dr. Caro remarked that the nipple-glass was used extensively in Sicily, but simply to protect from irritation produced by the clothes, and not for the cure of the nipple. He thought local applications were of no avail. To give the nipple perfect rest was the best treatment. To protect the nipple from irritation, he had used the glass shield very extensively.

In cases in which it was desirable to keep the air from the nipple, he had found gold-beater's skin to be the best application. The idea of keeping the nipple wet with milk was objectionable on the ground that the milk itself was soon so changed as to be a source of irritation; consequently, the cleaner the nipple could be kept the better. If local application was to be made, pure cold water was all that was necessary. The paramount principle in the treatment was perfect rest for the nipple.

Dr. O'Sullivan remarked that he had used cold water, and associated with it glycerine, which was very soothing. The main element in the treatment, however, was rest.

Dr. Compton said that he had seen the following mixture act very favorably as a local application:

℞. Tr. benzoin co.,
Glycerine, ää.

M.

To be applied just after the child had nursed, and wiped off before nursing was renewed.

MANAGEMENT OF THE BREASTS IN CASES IN WHICH NURSING IS NOT ADOPTED.

Dr. Hubbard asked the question, What should be done for the breasts in cases in which the child was still-born, or the mother not disposed to nurse her child? His practice had been to let the breasts entirely alone, and he had yet to see a mammary abscess following that method of management. He had recommended that method in the Infant Asylum, where most of the mothers were not disposed to nurse their children. He was at first opposed by his colleagues, but finally they consented to give the plan a trial, and during his entire connection with that institution there was not a mammary abscess formed. The method, however, wherever recommended, met with opposition from nurses and friends, and it was with the greatest difficulty that the physician could prevent drawing milk from the breast. The pain in the breasts, if any was present, as a rule subsided within twenty-four or forty-eight hours, and no further trouble was experienced if no attempt whatever was made to draw the milk. If the milk was drawn only once, the character of the case was entirely changed.

Dr. Ward remarked that it had been his practice in such cases not to draw the milk at all, and he had found that the pain ceased within one or two days.

Dr. O'Sullivan said that it had been his practice not to interfere with the breasts under the circumstances mentioned. He had seen only the most favorable results follow, when a rigid adherence was given to the method.

Dr. Purdy remarked that his experience had been in accord with Dr. Hubbard's. If the condition of the patient warranted it, he usually administered a brisk cathartic—indeed, kept up a slight diarrhœa for a few days—and thought it caused the milk to disappear more rapidly than it otherwise would.

Dr. Hubbard thought that, in accordance with a somewhat late suggestion, a bandage could, with advantage, be applied with the view of preventing the formation of milk.

Dr. Mundé referred to suppurative mastitis which had occurred in cases in which the bandage was used. His general practice was to let the breasts entirely alone. He had used belladonna, but did not think it necessary. It was soothing, however, and was not specially objectionable.

Dr. Caro believed that where the woman proposed not to nurse, it was the best treatment to let the breasts alone. But suppose the woman wished to nurse, and did nurse the child from one breast, and was unable to nurse from the other breast, what should be done? For example, a woman came under his care who had had the right nipple completely destroyed by a burn when a girl. She nursed her child from the left breast, and after three or four days there was considerable fever, and she complained of considerable pain over the right breast. Upon examination, it was evident that secretion of milk had been begun in the right breast, and he thought it necessary to resort to some means for its arrest. He applied fluid extract of belladonna twice a day for five or six days, and all evidence of milk disappeared. Whether the result was due to the belladonna or not he was unable to say.

PREMATURE LABOR AND FIFTY PER CENT. OF ALBUMEN IN THE URINE.

Dr. Hubbard remarked that the idea had lately been brought forward that, in cases of pregnancy in which fifty per cent. of albumen was found in the urine, premature labor should be produced as a prophylactic against puerperal convulsions. He protested strongly against such doctrine.

PILOCARPIN AS AN OXYTOCIC.

Dr. Mundé alluded to observations which had somewhat recently been made with reference to the occurrence of premature labor while pilocarpin was being used as a diaphoretic in the treatment of the albuminuria of pregnancy. The result of the observations was such as to give warning against the indiscriminate use of the drug in cases in which it was not desirable to produce premature labor.

Dr. A. C. Post reported a case of

EXCESS OF LIQUOR AMNII FOLLOWED BY INERTIA OF THE UTERUS.

The labor was regular, the child was born rather suddenly, and was followed by an enormous discharge of liquor amnii. The sudden cessation of the distention was followed by uterine inertia, which was soon overcome by manipulation and ergot. The chief point of interest was the liability to the occurrence of inversion or hemorrhage.

TRIPLETS.

Dr. Mundé gave a brief history of a case in which triplets were born. It was the woman's fifteenth confinement. The children were all girls. The first two were vertex presentations; the third presented trans-

versely, back forward, but the position was without difficulty changed by external version.

The aggregate weight of the children was seventeen and a half pounds. The mother made a good recovery. The children did well for a time, but in the course of one year all died of infantile diarrhœa. They were enclosed in *two* amnions and one chorion, a fact which explained the additional fact that they were all of the same gender.

Dr. Compton referred to the observation which had been made, that twins and triplets were usually preceded by several pregnancies.

PREMATURE LABOR IN A CASE OF PHTHISIS ATTENDED BY BRONCHIAL HEMORRHAGE.

Dr. O'Sullivan referred to a case in which premature labor occurred at the seventh month, and soon after a serious bronchial hemorrhage in connection with phthisis. The labor was normal, and the child lived twenty-four hours. He raised the question, Was there any relation of cause and effect between the bronchial hemorrhage and the premature labor?

Dr. Mundé thought there was probably no connection between the premature labor and the bronchial hemorrhage. There might be a connection between the phthisis and the premature labor, chiefly with reference to improper aeration of the blood.

ARM AND FUNIS PRESENTATION.

Dr. Compton related a case in which he found, upon his arrival at the bedside, an arm and a loop of the umbilical cord presenting. He pushed the arm up, and was soon gratified in finding that the head of the child was presenting. He pushed the loop of cord up, but, as soon as the fingers were removed, it returned. He placed the woman in all positions favorable to retention of the cord within the uterus, but all to no avail. The Doctor held the cord in place, with his hand in the vagina, for three hours. The labor continued; the woman began to show signs of exhaustion; his forceps were sent for, but under the influence of ergot, and before their arrival, the child was born alive, and did well.

Dr. Mundé remarked that in antero-posterior narrowing of the pelvis, prolapse of the funis was of frequent occurrence, and the cord would not remain when replaced in the uterus.

The Section then adjourned, to meet on the third Monday in September, at which meeting Dr. F. V. White is to read a paper on "Sore Nipples."

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, June 24, 1878.

Dr. John C. Peters, President, in the Chair.

POTT'S DISEASE—ITS PATHOLOGY AND TREATMENT.

Dr. Newton M. Shaffer read a paper upon the above subject. He began with the statement that opportunities for post-mortem examination in the early stages of Pott's disease were rare, and that he had never seen a case of acute Pott's disease. No one had attempted to trace the symptoms of spondylitis in its acute stages. It was typically chronic. It was so typically chronic that it was always difficult to decide in each case exactly at what time the disease began. He divided Pott's disease into four stages:

1. The prodromatous stage, which was indistinct, liable to escape attention, and was characterized by slight indisposition upon the part of the patient, that might continue for only a few days or for months, and sometimes was wanting.

2. The stage of pain, which was often described as the first stage. It was usually preceded and accompanied by reflex spasm of the spinal muscles due to irritation of the peripheral nerves.

3. The stage of deformity, due to want of substance in the vertebræ and intervertebral bodies.

4. The stage of abscess.

Paralysis of the lower extremities had been classed among the symptoms of the third stage.

Dr. Shaffer divided the cases of Pott's disease into two classes: 1. Suppurative; and, 2. Non-suppurative.

The non-suppurative variety occurred most frequently in the dorsal region.

The suppurative form of the disease occurred most commonly among children.

PATHOLOGY OF LATERAL CURVATURE OF THE SPINE.

Referring to lateral curvature accompanying Pott's disease, Dr. Shaffer expressed the opinion that in all cases of lateral curvature of the spine there existed at some point in the spinal column disease of the bones. He did not regard simple loss of balance of muscular power as a satisfactory explanation of the condition found in lateral curvature.

Again, idiopathic scoliosis was not likely to be developed simply because of unequal length of the lower extremities.

Primarily, muscular contraction might be the cause of lateral curvature, but the question remained, what was the change which produced the muscular contraction?

PATHOLOGY OF POTT'S DISEASE.

The parts involved in angular curvature of the spine were bone, cartilage, synovial membrane, and ligament. The fibrous capsule was excluded because it was rarely the seat of primary inflammation. In the absence of any facts with reference to the seat of the primary lesion in Pott's disease he considered it from the standpoint of clinical experience. Preparatory to a complete understanding of the significance of symptoms, Dr. Shaffer reviewed the anatomy of the bones, the intervertebral cartilages, the synovial membrane and the ligaments, and the conclusion was reached that the most important symptoms of Pott's disease were those which came through the medium of the nervous system. He believed he was the first to call attention to the fact that chronic joint disease might exist in any given articulation tissue, which was sparsely supplied with nerves, without producing any subjective symptoms. The neural symptoms in Pott's disease, therefore, were the most important as indicating the seat of the primary lesion, because they depended directly upon disease of the bone. The synovial membrane might be diseased for a long time before any symptoms would be developed, and the cartilages became diseased in consequence of disease of the bone. Until the bone was involved reflex muscular spasm did not occur, and reflex muscular spasm always indicated osteitis. The bone was a structure abundantly supplied with nerves, and when affected gave rise to neural symptoms; hence their importance. Reflex muscular spasm was not conservative as we had been told, but depended upon pathological change affecting the bony structure of the spinal column.

In fact, there was but little difference between idiopathic spondylitis and idiopathic disease affecting any of the large joints.

TREATMENT OF POTT'S DISEASE.

With reference to treatment, Dr. Shaffer believed it to be impossible to apply continuous extension and counter-extension, which could be maintained with any degree of success. He also believed there was no assurance that the extension reached the bones; regarded the change which took place in the projection as due to the effect produced upon the projection itself; thought it was more apparent than real, and was due to the distensibility of the normal tissues and the obliteration of the compensatory curve; and that there was no actual lengthening of the vertebral column, except what was permitted by the elastic ligaments. Further, he thought that lengthening out the spinal column was of no avail, because the space would not be filled with osseous material, that the column would sink back again, and that relief of symptoms and curing the case were two different things. Suspension and retention by means of the gypsum splint was no more likely to cure caries of the spine when applied to the trunk than when applied to any other portion of the body. Again, his experience had taught him that too much should not be expected from rapid improvement. The treatment by suspension and the plaster dressing did not prevent motion at the point where the disease existed, and, although it might place the patient in a condition favorable to recovery, the result not infrequently was just to the contrary. If Pott's disease was of traumatic origin, no doubt but that speedy cure would follow almost any plan of treatment.

He had had considerable experience in the use of the plaster jacket, and other methods of support, and he did not believe that any apparatus was capable of affording such uniformly good results as had been claimed for the gypsum dressing. As a support it failed when the disease was above the seventh dorsal vertebræ, and the bar running over the head from which support was to be made when the disease was higher up in the spine, was inoperative as a means of extension, and ungainly to the sight when compared with the apparatus devised and employed by Dr. C. Fayette Taylor. For disease of the vertebræ above the seventh dorsal he had discarded the plaster jacket, and in the treatment of disease below that point sufficient support could be given by almost any apparatus. Indeed, as had been stated, the vertebræ in that region were much less liable to become diseased than those higher up. The objections to treatment by means of the plaster-of-Paris jacket were, the great weight of the dressing, the difficulties and dangers attending its application, the liability to produce chafing and excoriations, which might be developed at any point, and go unrecognized until they became serious complications; the necessity of making suspension at each time the apparatus was removed; the great filth; and the nidus which it afforded for vermin. Dr. Shaffer regretted that he found so little to commend it to the use of the general profession. The country practitioner and the village blacksmith could apply the antero-posterior support as well as the plaster, and the advantages claimed for it were ease of adjustment, ease with which it could be removed, modified to suit the case and readjusted, the concentration of support for the diseased portions of the spine through the medium of the transverse processes without interfering with the muscles of respiration, and finally cleanliness. For those who could afford the steel apparatus there was no necessity for the plaster application. The form of apparatus which Dr. Shaffer thought best adapted to the treatment of Pott's disease, was a combination of Taylor's brace and the gypsum dressing. [The proposed combination was not described.]

Dr. Shaffer then presented a number of patients who had been treated and cured by means of the antero-posterior support.

One patient was presented who had been under treatment for hip-joint disease ten weeks before he came under Dr. Shaffer's observation. There was no deformity of the spine present when Pott's disease was diagnosticated, and the antero-posterior support applied. The patient, a child, had worn the instrument thirteen months. There was then (at the time the patient was presented) a visible projection of the spinous processes, showing that the diagnosis was correct.

The paper was accepted by the Society, and being open for discussion,

DR. LEWIS A. SAYRE remarked that, so far as the pathology of the disease was concerned, he had no criticisms to offer, but with reference to treatment he differed very essentially with the author of the paper. He had in his possession between seventy-five and one hundred braces which had been worn by patients in all stages of the disease, and he was not aware at the time of their removal when the disease commenced or when the patients began to wear the instruments, but at the time they were removed the disease was progressing. Those were cases which had formerly been under the care of other surgeons. In all the cases in which he had first used the brace himself, the deformity had steadily increased. The patients had recovered, it was true, and so also would they recover when kept in a horizontal posture, and many of them recovered without any treatment whatever, but recovery took place *with* deformity.

In the last patient presented by Dr. Shaffer there was no deformity when the instrument recommended by the doctor was applied; but it had been worn *thirteen* months, and at the end of that time there was a conspicuous deformity. Dr. Sayre's own experience had been the same, namely, that recovery took place while the children were wearing the brace, but that the deformity steadily increased while under treatment. When Dr. Taylor's brace was first devised, it was the best instrument we had up to that time, but the addition of the neck-yokes prevented the child from becoming straight, set aside one of the fundamental principles underlying the successful treatment of Pott's disease, namely, gentle extension, and was one explanation of the occurrence of some of the hideous deformities which he had seen developed while the instrument was being worn.

Again, the brace was objectionable because it made upon each side of the spine such pressure as interfered with a proper blood supply, and thus favored a long continuance of the disease.

Dr. Sayre believed that Pott's disease could be cured without deformity if gentle suspension and the plaster jacket were employed before deformity existed; that if deformity was present, it could be kept from increasing, and in many cases diminished by the same means.

The idea that whatever repair had taken place was broken up every time the jacket was applied or suspension made, was a false impression, and the idea advanced by Dr. Shaffer, in that respect, was not correct. If, as Dr. Shaffer claimed, chafing and excoriation was a common occurrence, it was due to either an imprudent or an improper application of the plaster dressing, and if such accidents had habitually occurred in his experience in its use, it was evidence that he (Dr. Shaffer) did not properly apply it.

With reference to filth and vermin, Dr. Sayre's patients had never complained of anything of the kind, nor had he seen any cases in which such complaint could be reasonably made.

Dr. V. P. Gibney remarked that he had never made a post-mortem in a case of Pott's disease without finding at some place a sac containing bony detritus or inspissated pus.

He had seen cases in which the vertebræ were diseased without involving the synovial membrane at all, the origin being in a simple osteitis.

Dr. Shaffer remarked that he had found the antero-posterior support an effective instrument in the treatment of Pott's disease; that he had employed the plaster treatment without prejudice, and had given the result of his experience in a conscientious manner.

The Society then adjourned.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 18th to August 24th, 1878.

Brown J. B., Major and Surgeon, President of Army Medical Examining Board, New York City. Relieved from duty in the Military Division of the Atlantic. S. O. 180, C. S., A. G. O.

White, C. B., Major and Surgeon. Granted leave of absence for one month on Surgeon's certificate of disability. S. O. 179, A. G. O., Aug. 19, 1878.

Campbell, A. B., Capt. and Asst. Surgeon. Granted leave of absence for three months from Aug. 9, 1878, on Surgeon's certificate of disability. S. O. 182, A. G. O., Aug. 22, 1878.

Torney, G. H., 1st Lieut. and Asst. Surgeon. Assigned to duty at Fort Wingate, New Mexico. S. O. 150, Dept. of the Missouri, Aug. 20, 1878.

Medical Items and News.

Contagious Diseases — Weekly Statement.—Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 24, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Aug. 17, 1878.	0	20	29	1	6	23	0	1
Aug. 24, 1878.	0	22	35	2	1	27	0	0

Office Surgeon-General U. S. Marine Hospital Service. Washington, D. C., August 24, 1878.

National Quarantine Report.—Abstract of sanitary reports received during past week under the National Quarantine Act:

New Orleans.—During the week ending yesterday noon there were 771 cases of yellow fever and 295 deaths, making in all 1,673 cases and 534 deaths. During the twenty-four hours to noon yesterday there were 123 new cases and 40 deaths.

Vicksburg.—At least 400 cases of yellow fever from date of commencement, Aug. 12th, to yesterday evening, and 69 deaths; 20 deaths during last twenty-four hours. Dr. Booth, in charge of the Marine Hospital Service at that port, telegraphs: "I am sick; impossible to procure accurate data."

Memphis.—One hundred and forty-four cases of yellow fever and fifty-three deaths during six days to Friday evening.

Canton, Miss.—First case of yellow fever occurred at Canton on August 1st. To yesterday evening there were eighteen cases and eight deaths.

Port Gibson, Miss.—First case of yellow fever, originating in Port Gibson, occurred Aug. 3d, resulting in death Aug. 8th. The disease began to spread Aug. 14th. One hundred and eighteen cases and nine deaths to yesterday morning.

Cincinnati.—To yesterday evening no more cases of yellow fever had developed at Cincinnati since the two mentioned in the last report. The engineer of the steamer "Golden Rule" was admitted to hospital the 22d inst. with yellow fever, and also one other case, probably yellow fever, from Memphis.

Morgan City, La.—One case of yellow fever, Aug. 21st, patient from New Orleans.

Ocean Springs, Miss.—Three cases of yellow fever and one death, all imported.

St. Louis.—Four refugees died of yellow fever at St. Louis during past week.

Louisville.—Four river boatmen suffering from yellow fever are under treatment in an improvised hospital on the Marine Hospital grounds, admitted from steamers "John Porter," "Sunflower Bell," and "Golden Crown," on the 17th and 18th insts.

Mobile.—The case reported as yellow fever Aug. 16th is now officially announced as probably a mistake. Dispatches to 23d inst. report good health.

Key West.—No yellow fever for three weeks to yesterday evening.

Grenada, Miss.—So many of remaining population stricken with the fever that definite information of number of cases and deaths could not be obtained.

Havana.—Ninety deaths from yellow fever and six of small-pox, week ending Aug. 17th.

Matanzas.—Decreased cases of yellow fever. Only five American vessels in port Aug. 16th, and all of them have either had or were having cases of yellow fever on board.

Cardenas and Sagua la Grande, Cuba.—No yellow fever. Advices to 16th inst.

Bombay.—Thirty-three deaths from cholera, and fifteen from small-pox, week ending July 2d.

Calcutta.—Nineteen deaths from cholera, and thirty-six from small-pox, week ending June 22d.

Reports from other places indicate good health.—Jno. M. Woodworth, *Surgeon-General U. S. Marine Hospital Service.*

Reports up to the morning of August 28th indicate that on the preceding day Memphis was at its worst, the deaths from fever numbering 32. On the same day, in New Orleans, there were 194 new cases and 49 deaths, showing no abatement in the epidemic there. In response to an appeal for government aid, from Vicksburg, the Secretary of War has sent rations and medical stores for 2,000 persons for twenty days, provided the route is open from Chicago to Vicksburg. The deaths in the latter city on August 26th numbered 23.

A Yellow Fever Commission.—A number of the most prominent citizens of Memphis have petitioned President Hayes to appoint a commission of the ablest physicians and chemists to make a scientific investigation into the "cause, nature, treatment, and future prevention of the fearful epidemic now raging."

A NEW DISEASE.—According to reports from Readville, Mass., several of the operatives in a curled hair factory have died of a disease supposed to have been introduced with the hair of diseased animals, principally Siberian horses.

A NEW KIND OF INDEX RERUM.—E. P. Hurd, M.D., of Newburyport, Mass., writes: "For the benefit of junior practitioners I will describe a plan which I have pursued for several years, of rendering available for emergencies in practice facts which I have noted in my reading of contemporary medical publications, but the details of which cannot be trusted to treacherous memory. An index rerum, properly so called, I have never kept.

"It is supposed that every physician has favorite works which he is in the habit of consulting frequently. Some good text-book on practice (Flint, Aitken, Hartshorne); on surgery (Gross, Erichsen, etc.), obstetrics (Hodge, Cazeaux, etc.). These constitute his 'index.' We will suppose that he is in the midst of an epidemic of diphtheria. It will be of inestimable benefit to him if he has at hand, for ready reference, hints as to pathology, treatment, etc., which he has gleaned from medical journals, and medical writings in general, for a series of years. To illustrate my method, I turn to Flint's Practice, p. 936, article Diphtheria. I find the following marginal notes, written with pencil: 'See Smith's article on Diphtheria, *Am. Journal Med. Sciences*, Oct., 1877.' [Here follows a brief summary of his treatment.] 'See *Bost. Med. and Surg. Journal*, Feb. 3, 1876; see MED. RECORD, March 11, 1876; also M. R., Vol. XII., page 120; also M. R., Vol. XIII., page 21.' Under the head 'Valvular Lesions of the Heart' I find references to MOXON's Lectures in the *Lancet*, 1878, Flint's Lectures in MED. RECORD, 1877, etc., with brief notices of hints for treatment there laid down. There is scarcely a page in my Flint that is not marked over in this way, and these marginal pencil-notes save a great deal of work when I wish to review the literature of a medical subject. I might say the same with reference to my Dewitt, Barnes, Cazeaux, Stillé. Of course, this spoils my books for every one but myself, unless my successor (whoever he may be) shall consider my marginal and foot-notes of some consequence to himself. I never read my RECORD, *Lancet*, Braithwaite, etc., without at the time transferring, in the form of pencil-notes, to favorite text-books, any hint which I may deem specially worthy of remembrance. This takes little time, and is just as good as any more formal index rerum. All my journals are carefully preserved and bound at the end of the year.

"I never can sufficiently regret that I did not commence practice in this way, putting the results of daily reading, in brief compass, each in its proper 'niche,' where the memory may be refreshed by referring to them, when such review is most needed."

SPIRITUAL MEDICINE.—Hitherto it has generally been believed by people of every sort of faith that when a man has once become "*victima nil miserantis Orci*," he has no longer any need of doctors, and that when the physician himself is about to take his departure for the land of the hereafter, he might with propriety be permitted, if he so desired, to indulge in some such valedictory to his pocket-case and the various articles of the pharmacopœia (to say nothing of such familiar companions as chicken-pox, measles, and whooping-cough), as when, Othello's occupation being gone, he bade farewell in such eloquent words

the neighing steed, the shrill trump, and all the rest of the pride, pomp, and circumstance of glorious war.

But now, it seems, the spiritualists have changed all that: so that there may be the consolation to certain unlucky practitioners who don't get along very well in this world, that they may have a chance to retrieve their fortunes in the next. In their recognized organ, the *Banner of Light*, published in Boston, there appears the advertisement of a certain Mrs. Danskin, of Baltimore, from which we learn that the late distinguished Benjamin Rush, of Philadelphia, is still pursuing the vocation upon which he reflected so much honor during his terrestrial career, and that he seems to have entered into a sort of professional partnership with the lady named.

Her card reads as follows: "During fifteen years past Mrs. Danskin has been the pupil of, and medium for, the spirit of Dr. Benjamin Rush. Many cases pronounced hopeless have been permanently cured through her instrumentality. She is clairaudient and clairvoyant. She reads the interior condition of the patient, whether present or at a distance, and Dr. Rush treats the case with a scientific skill which has been greatly enhanced by his fifty years' experience in the world of spirits. Application by letter, enclosing consultation fee of two dollars, and two stamps, will receive prompt attention."

From the above, while we learn that the Doctor is engaged in the practice of his profession among the unsubstantial shades, one would also infer that there is not sufficient work among his present clientèle to occupy all of his time, and so he has been prevailed upon (in what way it is not stated) to devote a certain amount of his leisure to imparting to the clairaudient and clairvoyant Mrs. D. such assistance in her professional labors as the benefit of his now very high scientific attainments and extended experience may be capable of conferring.

CHLORAL-PLASTER.—Dr. Solari recommends chloral-plaster as a sedative and counter-irritant in the treatment of the pains which are due to catching cold, such as lumbago and pleurodynia, and also of those which are due to neuralgia and to syphilis. Pix burgundica is spread on a piece of plaster large enough to cover the painful part, and from fifteen to thirty grains of powdered chloral are then strewed over every square four inches of the plaster. This is left on from twenty-four to forty-eight hours; on removing it, small vesicles will be seen on the skin, which should be pricked and covered with cerate. The blister heals quickly, but not so rapidly as the pain disappears.—*Allg. med. Cent.-Zeit.*, June 19th.

PERCHLORIDE OF IRON AS A TOPICAL APPLICATION FOR CHANCRE.—In an article on iron, in the *Dictionnaire Encyclopédique des Sciences Médicales*, M. Rollet gives the two following formulas for topical use in cases of chancre:

℞.	Aquæ.....	ʒ vi.	(24 grammes).
	Ferri perchloridi...	ʒ iij.	(12 ").
	Acidi citrici.....	ʒ i.	(4 "). M.
and ℞.	Acidi hydrochlor. } Acidi citrici..... } Ferri perchloridi. }	aa ʒ i.	(4 grammes).
	Aquæ destillatæ...	℥ i.	(32 "). M.

DR. HARWOOD WAKEMAN, who died recently by drowning in Blue Mountain Lake, in the Adirondacks, was a member of the County, Pathological, and Neurological Societies. He was a faithful and earnest worker in his profession, and his loss will be deeply felt by all who knew him.

Original Lectures.

FRACTURES OF THE NECK OF THE FEMUR IN THE ADULT.

A CLINICAL LECTURE DELIVERED AT BELLEVUE HOSPITAL, DECEMBER, 1877.

By FRANK H. HAMILTON, M.D.

GENTLEMEN:—Before I speak on the special subject selected for to-day's clinic, I wish to say a word upon another matter. Since my last lecture I have received a note from a gentleman asking whether I had not done an injustice to Dr. Buck, in saying that he did not first suggest or practise elevation of the foot of the bed as a means of making counter-extension in fractures of the thigh. I shall not hesitate to mention the name of the gentleman who wrote me the note. I do not think he would object to my doing so, for, although a pupil of Dr. Buck's, and naturally jealous of his well-earned reputation, he is not only one of our best surgeons, but a liberal man, and he would be unwilling to sacrifice truth to friendship. The gentleman of whom I speak is Dr. Weir, of this city.

In an interview which I had with Dr. Weir subsequently, he stated that, while a pupil of Dr. Buck's, and one of the house-surgeons to the New York Hospital in 1859, Dr. Buck directed him to elevate the foot of the bed in the manner that we now do, and that he dressed a fracture of the thigh in this way; and this, he feels certain, was the first time Dr. Buck tried this method. I was then able to show Dr. Weir that I had published this method in 1857, in the third part of my "Report on Deformities after Fractures," at pp. 436–7 of the "Transactions of the American Medical Association" for that year, a description of the method being accompanied with three woodcut illustrations; and I speak there of the method as having been suggested by Dr. James L. Van Ingen, of Schenectady, N. Y. I was engaged several years in the preparation of the consecutive numbers of this report, and they were published in the Transactions for 1855, 1856, and 1857. My impression is, that these woodcuts were received from Dr. Van Ingen several years before they were published, but this is not material; they were published in 1857, and Dr. Buck made his first experiment in 1859, according to Dr. Weir.

It will be seen, if you look at the report alluded to, that the foot of the bed was placed at different heights in the three woodcuts, but in all of them it was higher than we now raise it; and the first time I ever tried the method I followed Dr. Van Ingen's practice, and found it very uncomfortable. It is worth your while to notice that Dr. Van Ingen calls attention to the necessity of keeping the pillow under the head, so as to "leave the neck and shoulders quite free;" that he places a pad under the knee, and under the leg above the heel, as I have recommended to you before—showing that he had practical experience in the matter. In one of his woodcuts the extension is made by a gaiter, and in another by adhesive strips.

NOTE:—I find that there are two other errors to be corrected in this connection, one or both of which I may, perhaps, have contributed to propagate.

First.—Dr. Buck was not the first to employ the pulley and weight as a means of extension. The earliest account of this method of which I have any knowledge is furnished by Dr. L. A. Dugas, of Augusta, Ga., and will be found in my report to the Amer. Med. Association, vol. x., pp. 434–5, for the year 1857 illustrated by two woodcuts. As will be seen, directions are there given for making extension by a weight and pulley—the rounded top of the foot-board serving as the pulley. Dr. Dugas used a loop of bandage instead of adhesive plaster, to take hold upon the foot and leg. "A two or three pound weight should then be fixed to the foot and hung over the foot-board of the bed, as indicated in the annexed figures, so as to keep up extension, while the resistance of the patient's body will effect counter-extension," etc., p. 434. The weight was much less than we now use, but the idea of a weight and pulley is clearly stated. Dr. D. had even thought of and practised making counter-extension by the weight of the patient's body, but he had not elevated the foot of the bed. The apparatus as thus constructed was far less perfect and efficient than that now employed.

Second.—I was not the first to suggest the long side-splint as I have once publicly stated, to make certain that the body and upper fragment of the broken thigh were kept in line with the lower fragment. It was suggested and practised by Dr. Dugas, as will be seen by a reference to the same report. He used it to keep the body in line, but not to prevent eversion. His apparatus was also shown in the first edition of my book on Fractures and Dislocations, p. 414, but it was dropped in subsequent editions, and Dr. Buck's substituted. Dr. Buck used the same round ball for extension as was used by Dugas, but he substituted a pulley for the round top of the bedstead.

I will add a paragraph from a letter written by Dr. Dugas, and sent to me by Dr. F. G. Smith, Secretary Amer. Med. Association, not heretofore published. Perhaps the profession may have very little interest in these questions of priority, but as the questions have been raised it seems proper to state the facts once for all:

"AUGUSTA, GA., June 27, 1857.

"DR. F. G. SMITH:—

"DEAR SIR—In compliance with the request of Dr. Frank H. Hamilton, of Buffalo, I now send you a couple of sketches, with a brief description of the method I have *long adopted* in treating fractures of the thigh."

Then follows a description of the apparatus, and an allusion to his well-known mode of diagnosticating dislocations of the shoulder, which I shall omit. It is my impression that the apparatus will be found in some of the earlier numbers of the *American Jour. of Med. Sciences*, but I have no time to look for it.

The "American method," then, as I have chosen to call it, is indebted especially to the following gentlemen for its present state of perfection.

In 1851, Dr. Josiah Crosby published his method of extension by adhesive strips.

In 1857, and probably many years before, Dr. L. A. Dugas recommended the weight and pulley (the round top of the bedstead), and suggested the weight of the body as a means of counter-extension, and the long splint to keep the fragments in line, which I also used many years before I published any account of my method.

In 1857, or earlier, Dr. James L. Van Ingen elevated the foot of the bed to increase the weight of the body as a means of counter-extension.

Dr. Buck substituted a pulley proper and an upright board to carry the rope. He did not use the long splint, and for a long time after 1859 he used and recommended a perineal band

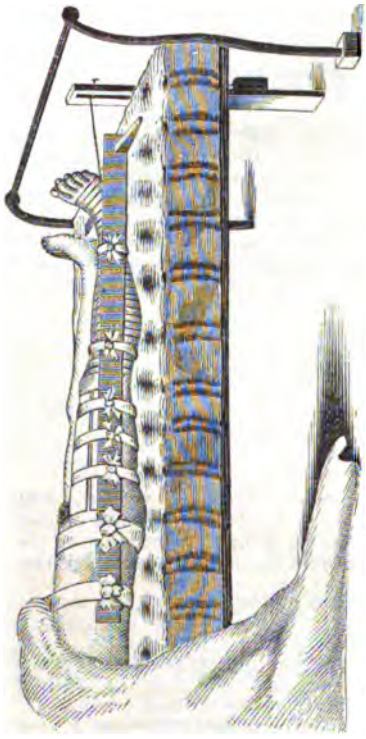
If I have contributed anything myself, it has been by the combination of the various improvements, by the addition of certain minor modifications, and by giving to the whole the test of extensive and comparative trial.

We will now consider *fractures of the neck of the femur*, of which we have several examples before us. I shall confine myself to these fractures as they occur in adult life. Fractures of the neck in early life are exceedingly rare, and the few cases which

have been recognized clinically have all left a doubt as to their exact character.

I do not propose to speak particularly of the pathology of these accidents, or of their causes or signs. I shall assume that you have studied all these matters. My present purpose is to speak only of the treatment.

It is necessary to say, however, that a fracture may occur within the capsule or without the capsule, and that the latter are almost always impacted, the neck being driven into the shaft, and being there more or less firmly fixed. We have these two kinds of fractures in old people mostly, and although they differ considerably as to their causes, their symptoms and



Dr. Hamilton's Dressing for Fracture of the Neck of the Femur.—*From General Treatise on Surgery.*

their results, the proper treatment in the two cases differs very little.

Let us see. If the fracture is within the capsule, it may not shorten at all at first; but inasmuch as in almost every such case, perhaps in every case, the neck will be in part or in whole absorbed, generally within a few days or weeks—for this process of absorption goes on very rapidly after the fracture has occurred, as I have proven by several observations upon the cadaver,—for this reason a shortening must soon occur, and in the end the upper end of the shaft will become attached by fibrous tissue, perhaps to the head of the bone, remaining in the socket, perhaps to the capsule and other parts about the joint—perhaps to both; and the shortening is apt to be very great, being probably greater in proportion as the upper end of the shaft and the portion of the neck attached to it is drawn farther from the head by the action of the great muscles of the thigh and hip. You see, therefore, that in this case it might be an object to hold the limb extended for a time with a weight and pulley, and thus to make the fibrous bond as short as possible; in other words, to secure for the limb as much length as possible. I do not speak of this as an ascertained fact, namely, that by permanent extension maintained for a few weeks, the limb, in case it has been broken within the capsule, will be in the end longer than if no such extension had been used. It is a theory only, which to me seems plausible, but which I have not proven. If, as some have thought, and perhaps some still think, a bony union is occasionally effected after this fracture, then certainly the extension would be useful for this purpose. I do not deny that such a thing has ever occurred, but I have never seen it, and I think its occurrence very improbable, even under the very unusual and the most favorable circumstance, namely, when the intracapsular fracture is at the same time an impacted fracture. I do not discuss that now. All I wish to say is, that my treatment would be proper in any view of the case.

There is another reason for extension in this case, if it can be employed. In my experience it has given the patient great comfort. It has arrested the contraction of the muscles and the constant motion of the fragments; and if the fragments are already displaced, this contraction and motion causes great pain by pricking and goading the inflamed capsule and the adjacent soft parts. The patient is easier the moment extension is applied. This is not speculative, but actually proven. I have observed it so often that no doubt remains in my mind as to its value in this point of view.

Let us consider now for a moment the *extracapsular*, impacted fracture; and these are almost always impacted.

These all unite readily by bone, and being impacted they unite very quickly. They are almost always found shortened from the very moment of the accident. Sometimes very little and sometimes a good deal—the shortening varying in different cases from one-quarter of an inch to one inch, possibly more or less in exceptional cases. This shortening has very little tendency to increase; but sometimes, if left to itself, it does increase quite perceptibly. The continued action of the muscles push the neck farther and farther into the broken, comminuted, and softened trochanter; softened after a few days by the inflammation.

At the same time and for the same reason that there is a tendency to shorten, there is also a tendency in the fragments to incline outwards laterally, and to cause a projection in that direction. In addition to all this the limb is apt to become everted, and this is partly owing to the action of certain muscles.

Now, with this brief explanation of certain peculiarities in these two forms of fracture of the neck of the femur, we will be able to understand what are the indications of treatment in each.

When speaking of fractures of the shaft of the femur in the adult, I said the first indication of treatment was to overcome the shortening caused by the contraction of the muscles, a shortening which we find present in these cases from the first. It is present immediately or very soon after the fracture has occurred, and it has to be overcome by energetic means. The second indication was to keep the fragments in line; and the third and least important, or least difficult to accomplish, was to prevent eversion.

When speaking in my next lecture of fractures of the shaft of the femur in children, I said the indications were in some sense reversed; the first or most difficult, being to keep the limb in line, and the second being to overcome the shortening in case any existed.

Now, in both of the forms of fractures under consideration to-day, the first indication is not to "overcome," but to prevent shortening, and incidentally to subdue or prevent pain; the second is to maintain

the fragments in line, and the third is to overcome or prevent eversion. The greatest difference is found in the fact that now shortening is inevitable, but we have the means of making it less than it would be if left to itself. At least in the case of the extracapsular fracture we can keep it where we find it, while in the case of the intracapsular fracture we can make the patient more comfortable and may hope to make the limb longer than it would otherwise be.

The treatment is then essentially the same as for a fracture of the shaft in the adult, except that instead of eighteen or twenty pounds we use eight or ten.—no coaptation splints are required—and the extension is seldom useful after about four weeks.

In the case of the patient before you, Catherine McCloud, the fracture is extracapsular. The patient is forty years old. She fell in the street, striking upon the left trochanter, and was on the same day brought to the hospital. Dr. Halsted, my chief house-surgeon, who is remarkably careful and accurate in his management of these cases, found the limb shortened and everted. The dressing was at once applied. Extension with a weight of eight pounds; the foot of the bed being slightly elevated, and the long side-splint being secured to the body and the left thigh. Now, at the end of four weeks, we permit this apparatus to be removed, and I find the limb shortened half an inch and slightly everted. The treatment is essentially completed, but she ought to remain in bed a week or two longer and then go about upon crutches.

The tendency to eversion in this case was marked from the first, and has not been overcome. My own long splint has failed to accomplish this; but Dr. Monroe, house-surgeon, has employed also in this case two pulleys instead of one, with the two lateral adhesive strips separated below the foot widely. This evidently has some effect in preventing eversion, but it has failed here. In addition to all this, there has been added an apparel devised by Volkman, a German surgeon, and described by Billroth; but you see this has failed equally. In short, you may learn from this that, in a certain number of cases of extracapsular fractures, and for reasons which I cannot now stop to explain, it will be found impossible to prevent eversion, but you ought always to try to make it as little as possible, and we think we have done so in this case.

The second example is in a woman much older, sixty-five years old. For your convenience in recording your notes I will give you her name also—Mary Stafford. She has been under treatment three weeks, and we find the limb shortened three-quarters of an inch, but with less eversion than in the preceding case.

Here is a third case; Pat Nugent, forty years old, fell thirteen feet, striking upon his trochanter, December 1, 1877. He was admitted on the same or following day, and was examined by me. The left leg was found shortened three-quarters of an inch, but he then informed us that this limb was always just three-quarters of an inch shorter than the other, and that his tailor always made this difference in the length of his pants. There being no eversion or other sign of fracture, I directed that no apparatus should be applied, but that the limb should be measured from time to time, and that he should be kept in bed. On the 10th day we found half an inch additional shortening, in all one and a quarter inches, and as this determined the question of fracture, extension was at once applied. The result is that we have prevented any further shortening. The limb being now one and a quarter inches shorter than the other, or one-half inch shorter than natural. There is now the characteristic enlargement about the trochanter, showing that it is an extracapsular fracture.

I cannot say positively that this limb was not some shortened at first, as I have nothing but his statements to rely upon; but it certainly shortened after he was admitted, and this is a new and important point. I believe, from my later experience, that this happens pretty often when extension is not employed.

My fourth case is of unusual interest, because the same fracture has occurred in both thighs at different periods of time, and the treatment and the results have been different. In all, I am able to present you then with five cases of extracapsular fracture. This last case is as follows:

Dennis Kelly, then seventy-two years old, was admitted to Bellevue in November, 1873, with an extracapsular fracture of the left leg. On the ninth or tenth day after admission, and after the fracture, the limb was done up in plaster-of-paris bandages, and soon after he walked about. The plaster remained on several weeks, being once renewed.

On the 30th of October last he fell upon the right side, breaking the neck of the femur on the right side, outside of the capsule, and was admitted at once to this hospital. On the following day Dr. Halsted applied my dressings, with eight pounds of extension. The man says: "From the moment the extension was applied I had no pain." This is the usual testimony. The apparatus was continued about five weeks, and we have now to note the results of the two fractures. The left leg—treated with plaster-of-paris—is half an inch shorter than the right—treated by extension. The left trochanter and upper part of the left femur is bowed out, causing an ugly projection; the right trochanter and shaft have their natural form and position. In short, the left limb is in the same situation it would have been if nothing had been done, perhaps worse. In the right leg the result is certainly better. I am going to have the patient photographed.

Intracapsular Fracture.—Finally, I wish to show you, gentlemen, this old lady, Catharine Daly. She says she is seventy years old. This is an intracapsular fracture; the only intracapsular fracture out of six fractures of the neck which I have shown you to-day. In my Treatise on Fractures, fifth edition, I have spoken of the relative frequency of intra- and extracapsular fractures as still in dispute. In my experience, however, the extracapsular have been made the most frequent.

Observe now the points of difference. This patient is the oldest of them all, but none are younger than forty. The accident occurred, not from a fall on the trochanter, but from a slip of her foot while trying to drive flies from the room; there is no enlargement about the trochanter, although three or four months have elapsed since the accident; the limb is shortened one inch; and this is more than in either of the other cases; the toes are turned out strongly.

During the first three weeks she was under the care of Dr. Mott, and extension was employed by my apparatus with eight pounds. Since then she has been encouraged to get up and use her crutches, which she now does to some extent daily. While the extension was on she was very comfortable, but a long confinement would have made her bed-ridden, and it was removed as soon as the stage of inflammation was passed.

This completes my analysis of these cases. The result is in no case perfect, but we have reason to believe that all of those have been benefited, and their limbs rendered more useful, in whom moderate and continued extension has been employed for a period of from three to five weeks.

Original Communications.

DOSE-DISPENSING SIMPLIFIED.

AN EASY, ECONOMICAL, AND ACCURATE METHOD OF DISPENSING MEDICINES IN A COMPACT AND PALATABLE FORM.

By ROBERT M. FULLER, M.D.,

NEW YORK.

(A paper read before the New York Academy of Medicine, Feb. 21, 1878.)

MR. PRESIDENT AND FELLOWS OF THE ACADEMY:—The inability frequently experienced by physicians to obtain certain medicines, in separate doses, of a desired formula and mode of preparation, led me, some time ago, to undertake a series of pharmaceutical experiments with a view of contriving some simple, inexpensive and readily available method of preparing the medicines so desired.

After a number of varied and careful experiments, I succeeded in devising four methods of preparation, which, thinking that they might prove of interest as well as utility to the profession, I have ventured to present to you very briefly, and, I fear, somewhat imperfectly, this evening.

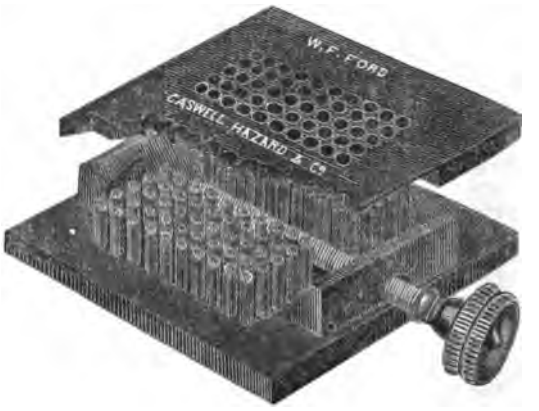
The preparations in question I have named *soluble tablets*, *tablet triturates*, and *pill* and *tablet saturates*, the former being designed for any powders which are to be administered in certain required doses, and the latter for certain of Squibb's fluid extracts, or other standard concentrated solutions. Of course, in the case of physicians practising in the city, where pharmacies are both so numerous and convenient, the application of these methods would be necessarily limited. They are mainly intended for physicians practising in the country, to whose use they are adapted by reason of their economy, dose-accuracy, compactness, and palatable form for dispensing.

The SOLUBLE TABLETS generally consist simply of certain medicines made into soluble paste with the aid of sugar of milk and alcohol, or water. In some instances, however, it is found necessary to employ an excipient more adhesive than sugar of milk. But in such cases, of course, as little of such excipient as possible should be used, in order that the tablet may be readily soluble in the mouth or stomach, or diffusible in a spoonful of water, and thus administered.

The tablets are intended to embrace any medicines that can be made into a paste which is not too tenacious, such as fluid extracts, or sugar of milk containing any per cent. of chemical, such as arsenious acid, sulphate of morphia, muriate of ammonia, etc. Both preparations can be made with alcohol of eighty-five per cent. or over, and pulverized acacia, according to the adhesiveness required.

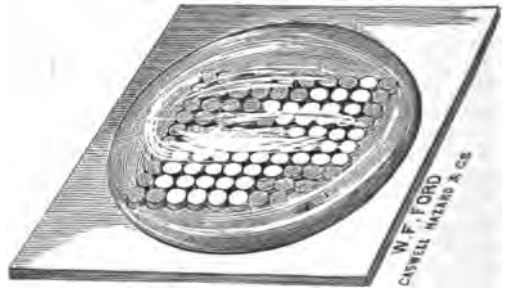
When fluid extracts are used, one minim or less may be mixed with a compound of two grains or less of sugar of milk and pulverized acacia, allowed to partially dry, and then be made into a paste with alcohol of eighty-five per cent.

The apparatus used in preparing the soluble tablets just described consists of a small bed-plate three-eighths of an inch in thickness, and five to seven inches square, made either of hard rubber or gold-plated metal, with a companion perforated plate, of similar dimensions, made adjustable and registering, and containing one hundred circular holes, more or less, as desired. The bed-plate is furnished with a number of small cylindrical projections, corresponding with, and fitting into the perforations of the upper plate. At each corner of the bed-plate is also fitted a short rod for the purpose of keeping the upper plate in position, and, at the same time, insuring its proper working. The upper plate is adjusted for the tablet mass, in accordance with the size of the tablet required, by a simple device of a screw, wedge, or lever. The paste, when of a proper consistency, is then introduced into the perforations of the upper plate by spreading it over its surface by means of a spatula. By the turning of the screw, or the removal of the wedge, the plate is next forced downward upon the projections of the bed-plate, which, in turn, force the tablets out in perfect shape. They are then removed and allowed to dry, after which they are used as has been described.



TABLET-MAKING APPARATUS.*

The TABLET SATURATES, which are similar to the pill saturates, to be described later on, are merely porous troches, or tablets designed for saturation. The difference between the tablets and the pills, beyond the difference in shape, being that the former will absorb a much larger quantity of fluid extract, or other standard concentrated solution, than the latter. The porous quality is secured generally by mixing *finely pulverized* sugar of milk with alcohol of eighty-five per cent., and then forming the paste into tablets of any desired size, and allowing them to dry. The tablets as thus made would be adapted for fluid extracts and certain solutions of great consistency, while a paste made of sugar of milk, mixed with water, would be found better suited for fluid extracts and certain solutions of less density.



METHOD OF TABLET SATURATION.

The method of medication consists of arranging any

* Mr. W. F. Ford, of Messrs. Caswell, Hazard & Co., has kindly furnished the above figure of the tablet-making apparatus, combining the screw and wedge principle, and also the wood-cut illustrating the method of tablet saturation.

number of tablets upon a glass plate, either together, in consecutive parallel rows, as shown in the accompanying wood-cut, or, in some instances, separated.

In the former case the fluid extract, or solution, is poured over the tablets, in the proportion of one minim to two grains, or a sufficient quantity for complete saturation, while in the latter a corresponding quantity of the solution is dropped upon each tablet by means of an improved minim dropping-tube. A funnel or glass may be loosely placed over them. They are then allowed to dry, after which they are ready for use.

MINIM PIPETTE.

The apparatus used in preparing the tablet saturates is similar to that used for making the soluble tablets. It consists of a similar bed-plate, provided with similar projections, and a perforated upper plate, the thickness and the diameter of the perforations of which are made with regard to the numb r of grains to be contained in the tablet desired.

The paste for the tablets is introduced into the perforations by spreading it with a spatula over the surface of the plate, while the latter rests on a square of glass. The under surface is then smoothed over, and the plate placed into position upon the corner rods of the bed-plate, and the apparatus operated as when making the soluble tablets.

The TABLET TRITURATES consist of triturations of metallic, mineral, and vegetable medicines, such as were mentioned in the paper recently read before the Academy by my friend Dr. Piffard, and found in the MEDICAL RECORD, vol. xii., p. 756. These preparations can be mixed with alcohol of any per cent., or water, according to the adhesiveness required, and the paste thus formed is then readily made into tablets of any size, with either of the above apparatus, as may be desired. They may also be made very inexpensively with a less elaborate apparatus, consisting of a single plate of hard rubber, containing two hundred holes of any dimension required, drilled as close together as possible. These being filled with the paste, the tablets, when not too tenacious, may readily be removed in proper shape by holding the plate in one hand, and with the other tapping it with a spatula, when most of them will fall out, those that may remain being easily removed by pushing them out with a small rod. Dr. Piffard has found that a plate three millimetres in thickness, containing holes six millimetres in diameter, will produce tablets of about one decigramme in weight, while a plate four millimetres in thickness, with holes eight millimetres in diameter, will produce tablets of about two decigrammes in weight.

The PILL SATURATES possess two favorable qualities, namely: they are made easily, and at an extremely low cost, those made with fluid extracts costing only about twenty-five cents per thousand. But little time is needed in their preparation, and the only apparatus required is a dispensing vial and a minim measure, or pipette. In the numerous experiments I have made, I have found that solutions in alcohol of eighty per cent., and aqueous solutions concentrated, were best adapted to the purpose of saturation. I have, however, used various other liquids and solvents with equally satisfactory results.

The process of saturation is very simple. Sufficient sugar globules of uniform size are introduced into a square dispensing vial of either four, eight, or sixteen ounce capacity, according to the number of pills designed to be saturated, to nearly cover one of its sides when it is placed in a horizontal position. I have found that No. 60 pill, which is six millimetres in diameter, is of suitable and convenient size for the purpose. [These globules, which are made of refined cane-sugar, are numbered as to their size upon a basis of measurement of *ten diameters* in millimetres.] The vial is inclined, and sufficient liquid—in which has been dissolved the required amount of medicine for each pill—is introduced by means of a minim pipette or measure, to completely saturate the globules. The vial is then held in a horizontal position and the pills agitated to equally moisten them, care being taken to avoid spreading the liquid on the other sides. While in this position, the vial is corked and allowed to rest until the pills are thoroughly saturated, which requires twenty-four hours or more. The vial remaining in the same position, the cork should be removed and the pills allowed to dry by evaporation.

MINIM MEASURE.

Where alcohol of eighty per cent. or more is the solvent, the solution to be introduced into the saturate can be of any strength. This principle applies also to the other solvents, such as ether, in which sugar is insoluble, and which will evaporate on standing. When water, or alcohol of less than eighty per cent., is the solvent, the solution should be concentrated to avoid the dissolution of the pills. The capacity of absorption possessed by the pills is varied, the maximum being one minim to about 15½ grains when the solvent is alcohol of eighty per cent. and over. The proportion, however, is not so large where concentrated aqueous solutions, or alcoholic solutions of less than eighty per cent. are used.

When these saturates contain volatile medicines, such as camphor, etc., it is expedient to give them a thin coating of albumen, or some similar transparent substance. While this prevents volatilization, it also enhances the appearance of the saturate. The method of coating, like the process of saturation, is also simple. The saturates are agitated in a little albumen, and, when covered, are placed on a glass plate, separated, and allowed to dry. A second or third coat may be given if necessary.

This constitutes the salient features of the four methods. They are given to the profession now at the personal solicitation of several of its members, and with full consciousness that there is still much room for improvement in them. They have at least a justification for their presentation at the present time, however, in the fact that, if applied to the field for which they are designed, they will be found practical.

The application of the principles is necessarily limited; but if, in the future, it shall have been found that its adoption by the profession resulted in the increased utility of a certain class of remedies, or the simplification of the method of administration, the purpose of the presentation of this paper will be more than fulfilled.

Thanking the members of the Academy for the honor and privilege conferred upon me in the granting of this hearing before them, and for their kind attention, I respectfully submit for their inspection a few preparations made by the method described:

TABLETS.

Acid. arseniosi	1-20, 1-50 and 1-100 gr.
Aconitiæ	1-50 "
Aconiti rad. ext. fl (Squibb's)	½ and 1 ♏.
" " tinct. "	½ and 1 "
Ammoniæ muriat	3 and 5 gr.
Antimon. et potass. tartrat	1-50 and 1-100 "
Atropiæ	1-60 "
Belladonnæ fol. ext. fl. (Squibb's)	1-2 and 1 ♏.
Calomel	¼, 1 and 2 gr.
Digitalin	1-60 "
Ergotæ ext. fl. (Squibb's)	½ and 1 ♏.
Ferri lactat	1 gr.
Hydrarg. biniodidi	1-32 "
" chlor. corros	1-10 "
Ipecac. ext. fl (Squibb's)	¼, ½ and 1 ♏.
Morphiæ sulphatis	1-8, 1-6, ¼ and ½ gr.
Nucis vomicæ ext. fl. (Squibb's)	¼, ½ and 1 ♏.
" " tinct. "	1 "
Potass. bicarb	3 and 5 gr.
" chlorat	3 and 5 "
Quiniæ bisulphat	½, 1 and 2 "
Sodæ bicarb	3 and 5 "
Strychniæ	1-60 "

PILLS.

Aconiti rad. ext. fl. (Squibb's)	1-6, 1-10 and 1-20 ♏.
Belladonnæ fol. ext. fl. "	1-6, 1-10 and 1-20 "
Capsici " " "	1-6 1-10 and 1-20 "
Ipecac. ext. fl. (Squibb's)	1-6, 1-10 and 1-50 "
Nucis vomicæ ext. fl. (Squibb's)	1-4, 1-10 and 1-50 "

186 WEST 42D ST.

THE ANTECEDENT TREATMENT OF THOSE EXPOSED TO ZYMOTIC DISEASES.

BY E. M. HUNT, M.D.,

METUCHEN, N. J.

AN address before the American Medical Association (1877), and two articles on individual sanitation (MEDICAL RECORD, N. Y., Nos. 359, 370), have brought me letters from individuals—some of whom are personally unknown by me—sufficient to show that the subject is one eliciting much inquiry. I am asked to state definitely the theory of prevention, and the details as applicable in practice.

First of all, let it be understood that the proposal to prevent or abate zymotic diseases by antecedent medication is based upon two views:

I. That the contagium vivum is introduced into the human system from without, and mostly through inbreathed air. The proposition is so to surcharge the mouth and nostrils with substances inimical to the lodgment, propagation, or absorption of the contagium as to render the breath and the tissues more immediately exposed to inspiration unfriendly to the development of the contagium. When the floating infective particle presents itself, either for local manifestation or for absorption, it may take but slight unfriendliness of reception to prevent morbid result. I know not how little sulphur, or even lard alone, will prevent the egg deposit of the acarus scabiei or its incubation. The same is true as to the attachment of fungi, spores, etc. What we know as to both plants and animals shows how condition of surface, and even odors, determine choice of location, and the "instinct" of "infectants" shows choice and interruption not less wonderful than that which occurs in animal and vegetable (parasitic) life. In diseases such as diphtheria and scarlet fever, which have, at the start, such marked local manifestation as to lead to the hypothesis that they are local before they are constitutional, there is indication for special localization of protective methods besides the constitutional prevention or treatment.

In an article on diphtheria in your journal of Jan. 23, 1875, we therefore insisted upon the value of local medication, although aware of the disposition of some good authorities to ignore it. Local applications to the membrane and its edges, local ablution of the fauces to prevent the adherence or absorption of infected particles, avoidance of swallowing the spittle or secretion, and frequent rinsing of the mouth, were advised. Our design and method is not to leave the mucous membrane of the air-passages without the presence of the antiseptics. We even value the muriatis ferri chlorid. the more because of its corrugant or mechanical effect, as it thus disturbs the apposition of surfaces. In an article on scarlet fever in the RECORD, June 19, 1875, the same frequent cleansing of the throat, with a view to local effect, is insisted on. It somewhat surprises us to hear one of your recent contributors speak of his new method of frequent local medication.

Our second proposition is so to introduce substances into the blood, and through it into the body, as to prevent those fermentive, defibrinizing, or destructive processes which come to constitute the peril of these diseases. The article just alluded to sufficiently presents the method as adopted for early treatment. But we believe further that certain substances, thus introduced into the blood, and mingling with the secretions before the prodroma are manifested, are still more operative for prevention or limitation of the infective diseases. We thus not only protect the portals of entrance, but so infuse the fluids, glands, etc., as to have present in them an agent which will resist such morbid action as the disease toxic seeks to set up. How much may be due to the local hindrance to fertilization, and how much to the constitutional resistance established, may not, in each case, be easy to determine. But when we find how readily chlorate of potassium, after being administered, is found in the secretions, how soon a few grains of pure protochloride of iron increase by count the red globules of the blood, how defibrinization of the blood—so constant an occurrence in some of these diseases—is retarded by certain additions to the vital fluid, we are very hopeful that our power to suspend the action of disease poisons will be greatly augmented.

With quinine the experiment has been sufficiently sustained. It is taken—and taken successfully—as a prophylactic, by persons who have not had ague, but who are compelled to traverse miasmatic districts. The ratio of escape, and the value of such treatment to prevent recurrence, simply mean that somehow such resistance of the system is established as prevents the usual manifestation of morbid power. The miasm is inbreathed, but the receptivity of the system is suspended. We would experiment in the same direction in reference to all diseases the causes of which enter by atmospheric conveyance. The principle, too, is applicable to some of the diseases conveyed by imbibition. It will be a great gain if, in addition to seeking and finding the contagium vivum, or the conditions of its propagation by external nuisances, we can also exercise upon the individual prophylaxis, which means "*to defend beforehand.*" The doctrine of the incompatibility of certain substances with the development of zymotic diseases is quite in accord with views which have been entertained or illustrated by facts. The influence of the sulphites, as shown by Prof. Polli, of Milan, we have before noted. The interference of vaccination with the progress of whoop-

ing-cough has long been asserted by various reputable practitioners.

Dr. E. J. Syson, one of the English Medical Officers of Health, in a paper noticed in the *London Sanitary Record*, November 23, 1877, as of great importance, advocates the antagonistic treatment. He was led by some facts coming under his notice "to infer that it was impossible to vaccinate successfully a patient who was at the time under the medicinal influence of arsenic." In other words, it is possible to put the system in a condition temporarily unsusceptible to the "contagium vivum." He applied this mostly to the use of arsenic as an antiseptic in cases of actual attack. So important do the facts seem to the reviewer, that he says, if they are corroborated by other trials, the value of such treatment will be but little less than that of the discovery of vaccination. The paper of Prof. Hodgen, on Antiseptic Surgery (Int. Med. Congress, 1877), is worthy of reading in its bearing on antiseptic medicine. The third conclusion is, "It is possible that the living solids and liquids of the body may be so altered that they shall not furnish the conditions necessary to putrefaction." So, as to zymotic diseases, I believe we are yet to come to a recognition of our power by the use of medicines in advance to protect from prevalent epidemics. One class of agents may do it by the action of presence, another by chemical reaction; another by such antiseptic action as suspends excessive metamorphosis, or so deals with débris as to render it innocuous. Others, as is claimed for ammonia and liquor potassæ, retard the coagulation of fibrin. We are no longer confined to chemical antidotes, although these may operate upon disease toxics as well as others. Ergot and nitrate of amyl affect the calibre of blood-vessels, on a plan different from that of gallic acid.

Oxygen, electricity, ammonia, etc., are showing powers quite different from those of an alkali upon an acid. Just now we are not so much concerned about the theory of action as about the fact. The need is to accumulate evidence by those whose trials are exact in the details of method and in the record of results. We cannot at present be decisive as to all the agents which interfere with zymotic infections, or as to those which are especially adapted to each particular form. We need only now indicate those upon which we have relied, and the method of their use. The articles themselves are not new, but they are claimed to be preventives, to be used before any manifestation of disease in the individual. We shall here merely outline the method of individual sanitation adopted in diphtheria and scarlet fever as a specimen of the general course of management.

In the case of all children in the family beside the one attacked, give the skin a washing or wiping each day with lukewarm carbolic wash of the strength of Squibb's 2 per cent. disinfectant solution of the mixed phenols. As we have always inclined to the view of a localized planting or absorption, we use frequent local treatment. A gargle of chlorate of potassium three grains, tinct. chloridi ferri three drops, water three drachms, is to be used frequently in the mouth, and some of the same is used about the nostrils. Frequency at first is far more important than quantity. Employ both what is used as gargle and for administration every two hours in the day, and every two or three hours between 10 P.M and 6 A.M. We give internally every three hours the same amount as named above for a gargle, and every two hours if there has already been more than two days of exposure. After one or two days the chlorate of potassium and the iron can be detected in the secretions. So the buccal cavity and fauces have a share from this source, and the local use may be lessened one-half in frequency. The design is not to leave the mouth or the system without the indicated presence of these two articles, during what would be the prodromal stage of the disease. In diphtheral exposure we give in addition two grains of quinine twice each six hours apart. It is important to have the tinct. muriatis ferri of that made several months, and in its purest form, in which, and in which only, it contains the "sesquichloride of iron, muriatic acid, and alcohol, and from the reaction of the last two ingredients muriatic ether." "It is," says Wood, "possessed of peculiar properties, probably in some measure owing to the ether which it contains." In the preventive method for scarlet fever we do not use quinine. In addition to the diphtheral treatment we use Calvert's carbolic acid in a weak solution twice per day, and cleanse the teeth and mouth with a tooth-powder of equal parts of chlorate of potassium and powdered gum arabic. More attention is to be paid to a restriction of animal food with children who are full habited, and if the iron produces any constipation, as it generally does not, a mild cathartic is of service. Fuller particulars as to these or other diseases are not needed beyond those given in previous articles, and until more observations from others are accumulated. Reports either of failure or success need to be explicit as to the length of medication and the precise frequency, and the whole amount of preventive used; also as to the degree of severity in cases in which attack is not avoided. Our position as to the plan of prevention is not that of dogmatism, but only that of an impressed inquirer. Sir Thomas Watson has ably written on the abolition of zymotic diseases, from the standpoint of outside sanitation. There is internal sanitation as well. We do not fasten our faith to any one remedy, but believe there is a field of observation in the area of personal disinfection and antiseptic provision which may yet show us how to invalidate the title and so take possession as to dispute the occupancy of many an infective disease. It is not by large dosing or inadvertent medication, but by that intelligent supervision and timely contravention which make the ounce of prevention more potent than the pound expended for attempted cure—too often failing just because the vicious poison has already so affected fluids and functions and organs as to impede those processes which are not less indispensable for the physiological effect of medicines, than for that of all vital repair.

If "antiseptics may alter the tissues of a wounded surface so that, though septic matters are present, they may not be absorbed," and if living solids and liquids may be so altered that they shall not furnish the conditions necessary to the development of disease, we will not despair of "prohibiting," of "having beforehand" in the system unsusceptibility to the invaders, such as will not respond to their attempt at sovereignty.

LECTURES ON COOKERY TO MEDICAL STUDENTS.—Lectures upon sick-room cookery were recently given by Miss Dodds to the medical students of Edinburgh. As might have been expected, the attendance was large and the audience highly appreciative.

DR. FLEETWOOD CHURCHILL, the late distinguished professor of midwifery in the School of Physic in the University of Dublin, etc., died recently in County Tyrone. He will be recollected by the most of the older medical men as the author of a very popular treatise on midwifery.

Progress of Medical Science.

ENDOCARDITIS AS A COMPLICATION OF TYPHOID FEVER.—Endocarditis is a sufficiently rare complication of typhoid fever to render interesting the following case, observed on the service of M. Desnos, *Hôpital de la Pitié*. The patient was admitted to the hospital with typhoid fever, from which he was recovering when he suffered a relapse; while convalescing from this, undue exposure brought on a severe attack of bronchitis, accompanied by diarrhœa. This left the patient in a very reduced condition, and predisposed to the attack of phlegmasia alba dolens which shortly afterwards appeared in the left leg. Œdema of the other leg was soon observed at the same time, with marked dyspnœa, and auscultation revealed endocarditis, characterized by a double murmur at the base. As, during the progress of the disease, frequent and careful examinations had failed to reveal any affection of the heart, M. Desnos did not hesitate to consider this a recent attack dependent on the fever from which he had been suffering. Typhoid fever, like variola, and scarlatina, and some other fevers, may now be looked for in the previous history of those subjects of heart disease in whom the cardiac affection cannot be traced to some previous attack of rheumatism.—*Journal de Médecine*, December, 1877.

ENDOCARDITIS AS A COMPLICATION OF GONORRHŒA.—Gonorrhœa is so generally looked upon as a benign affection, that the possibility of such a complication as endocarditis is but rarely considered in the prognosis. In the following case, however, M. Desnos is confident that he had an endocarditis clearly traceable to gonorrhœal rheumatism. The patient was admitted to the hospital for acute bronchitis, and shortly afterwards was seized with persistent pains, accompanied by redness and swelling in the shoulder and in the sterno-clavicular articulation. Up to this time he had never suffered from articular rheumatism, but he was then suffering from gonorrhœa. A little later he was attacked by intense dyspnœa, accompanied by palpitation; the action of the heart became tumultuous and irregular, and it was soon easy to show all the signs of endocarditis, with mitral stenosis and insufficiency. Grave interference with the circulation occurred, and a general bronchitis supervened, which carried off the patient. The autopsy verified the diagnosis of endocarditis, which was found to extend as far as the aortic orifice. M. Desnos considered the endocarditis as evidently connected with the gonorrhœal rheumatism.

When presenting the pathological specimens obtained from this patient to the *Société médicale des hôpitaux*, M. Desnos remarked that endocarditis might complicate gonorrhœa under two circumstances: either no articulation is involved, the endocarditis appearing alone in the course of the disease; or, as is much rarer, it is developed simultaneously with the gonorrhœal rheumatism. M. Desnos has already observed a case of this. It is well to add also, that before the endocarditis had been manifested by the general symptoms, the heart had been carefully examined, on account of the persistence of the bronchitis, and had been found perfectly normal. There had been, besides, in the course of the rheumatism, two phenomena very characteristic of gonorrhœal rheumatism: first, the localization of the disease in the sterno-clavicular articulation, and second, the absence of profuse sweating, except perhaps towards the end, when it could be explained otherwise than by depending on the rheumatism.—*Journal de Médecine et de Chirurgie*. Dr. Marty has collected ten cases in which disease of the heart or pericardium has been developed within four or five weeks of the commencement of a gonorrhœa. (See MEDICAL RECORD, No. 353.) In eight of these cases gonorrhœal rheumatism had preceded the cardiac complication.

BALSAM OF GURJUN IN GONORRHŒA.—Balsam of gurjun, or wood-oil, is an abundant product of some of the resinous trees of India, resembling copaiba in appearance, and said by some to exceed it in its specific effects. M. Vidal was the first to experiment with it in France, and he looks upon it as being possessed of such remarkable properties, that it will rapidly come into general favor. In India it has been used with success in the treatment of leprosy, and, in one case of this disease under the care of M. Vidal, good results have followed its administration. It is in the treatment of gonorrhœa, however, that the most brilliant results have been obtained, the time of treatment varying in seventeen cases from ten to twenty days, it being shorter in those cases in which it was begun after the inflammatory stage had passed. M. Vidal uses the following formula:

℞.
Wood-oil,
Syrup.....āā 4 grammes.
Inf. aniseed..... 40 "

This draught was administered twice a day, at the beginning of meals. It is seldom necessary to exceed this dose, which is well tolerated, and of which the only effect on the intestinal track is the production of one or two stools within two hours after the meal; the maximum dose was eight grammes. At first, a certain amount of nausea is produced, but it passes off very rapidly. A quarter of a glass of wine administered after the potion renders it better tolerated. One of the advantages of the medicine is that there need be no change in the diet; wine was given during the whole treatment without producing any ill effects. Employed with the same care as copaiba, gurjun presents marked advantages. Its action is more rapid and certain, for it has frequently succeeded where copaiba has failed; it gives rise to no erythema; it gives no unpleasant odor to the breath or urine, which is one of the inconveniences of copaiba; locally, it succeeded well in vaginitis and balanitis; lastly, it costs less than copaiba.—*Journal de Médecine et de Chirurgie*, December, 1877.

UNEQUAL LENGTH OF LOWER LIMBS.—The equality in length of the opposite limbs has hitherto been but little questioned; but Dr. Jarvis Wight, of Brooklyn, made a series of sixty observations, which show that inequality of the lower limb is not only common, but the rule. Dr. Hamilton questioned the accuracy of these observations in one of his clinical lectures, and called forth in reply a paper read by Dr. Wight before the Kings County Medical Society. In this paper forty-two additional cases were recorded, giving results very similar to the first series. Some interesting measurements were given, which tended to show that differences existed both in the femora and the tibiæ, and also in the humeri, but no extended number of observations have as yet been made in this direction. Combining these two series of cases, Dr. Wight found inequality in more than three-quarters of the number, varying from one-eighth inch to one inch, averaging one-quarter inch. This explains the great variation in the amount of shortening occurring after fracture of

the femur, for, if the longer femur be broken, the "natural inequality" must be subtracted from the actual shortening; or, if the shorter femur be affected, the "natural inequality" must be added to the actual shortening to give the "accidental inequality" of the limbs. This would also explain those rare cases in which the fractured femur is longer than its fellow. The fact that these latter cases are not more common than they are, Dr. Wight explains in the following manner: The average shortening after fracture is probably not affected by the natural inequality, for the shorter limb is presumably broken as frequently as the longer; this average shortening he places at five-eighths inch, and, of course, the natural inequality must be greater than this to give lengthening to the fractured femur, and this great inequality is so exceptional that he estimates the changes of lengthening as one in two hundred cases. The article concludes with a letter just received from Dr. Hamilton, from which the following is an extract: "I have done you and science an injustice, and I make haste to repair the wrong. Yesterday I, for the first, found time to verify, by actual observation, the correctness of your statement and that of Dr. W. C. Cox, of Philadelphia, that the femora of most adults are unequal in length. In a dozen or more measurements, made with great care by my house-surgeon and by myself, a large majority were found of unequal length, and the left limb was generally the longest. I propose to extend my observations and to give them more precision, but I have made enough to satisfy me that you are correct." —*Proceedings of the Medical Society of the County of Kings.*

The Strong Elastic Bandage.—The treatment of varicose and other chronic ulcers of the leg is so generally unsatisfactory, that any new method promising favorable results is to be hailed with delight. The latest novelty is the use of the strong elastic bandage, with which Dr. Henry Martin claims to have cured over six hundred cases without a single failure. The bandage is of "pure rubber," ten and a half feet long, three inches wide, and thickness of number twenty-one "Stubs' wire gauge." The length and breadth may vary with the size of the limb, but this is the most desirable thickness. It is applied by winding one turn just above the malleoli, then one around the instep and sole, then spirally up the leg to the knee, where it is fastened by tapes attached to the end of the bandage for that purpose. If it is desirable to apply it as far as the groin, a bandage eighteen to twenty feet long will be necessary. At night the bandage is removed and the ulcer protected by a piece of oiled linen, or some equally simple dressing. In the morning all traces of oil or cerates must be carefully removed, as fatty matters tend to injure the rubber, and the bandage should be reapplied before leaving the bed. It should be applied with just sufficient snugness to prevent it slipping down, and the increase of blood in the veins on standing will cause it to become of the exact degree of tightness. The bandage keeps the leg warm, moist, and air-tight, conditions most favorable to granulation and cicatrization, and in addition the gentle, even pressure so supports the distended and weakened vascular coats as to prevent that venous congestion so frequently the cause of the malnutrition of skin. For the first one or two weeks a papular eruption appears under the bandage, caused by obstruction to the cutaneous follicles. The bandage is their best treatment. In non-specific ulcers no other local treatment is necessary. The circulation of the limb is not stopped, but, owing to the support given to the vessels, is facilitated; thus there need be no fear of causing œdema of the foot—on the contrary, the œdema which so constantly accompanies varicose ulcers is rapidly absorbed. The occurrence of œdema indicates the improper application of the bandage.

The use of this apparatus is not confined to the treatment of ulcers; injuries and diseases of the joints, especially of the knee and ankle, are equally benefited. In sprains, the strong elastic bandage wound around a joint affords a constantly present substitute, externally, for the disabled ligament. The constant pressure induces a rapid absorption of the exudation among the tissues about the seat of injury, and the gentle, equable warmth and moisture, which always accompany its application, have a most favorable effect in alleviating and preventing inflammation. In diseases of the joints marked by effusion, the application of the bandage after aspiration has been followed by complete success. In these cases the bandage should be applied day and night for six to eight weeks. Its use is also recommended in disease of bursæ mucosæ, œdema, erysipelas, and erythema, cutaneous affections, and as a radical cure for varicose veins; in the latter case it is supposed to act by causing adhesion of the walls of the vessels, and their consequent obliteration.

Carbolate of Soda in the Treatment of Nervous Affections of the Respiratory Passages.—Dr. Pernot, of Lyons, has employed the raw carbolate of soda extensively during the past year, and regards it, when properly used, as a very valuable remedy in the treatment of the above-mentioned affections. It has two principal actions, viz.: it is disinfectant and antiseptic, and it exerts a modifying and curative influence on bronchial affections, and particularly on pertussis, for which it is almost a specific. He calls it raw carbolate of soda, because, in addition to the soda and carbolic acid, it contains many of the constituents of tar. When coal tar is distilled at a temperature of from 170° to 220° C., a heavy oil is obtained which contains forty per cent of phenol. On treating this with a solution of caustic soda a heavy brown liquid is thrown down, which is the carbolate of soda along with certain impurities derived from the tar. According to Dr. Pernot, all nervous and spasmodic affections of the bronchi—asthma, catarrh, influenza, and simple colds at the outset—are markedly influenced by the vapor of this raw carbolate of soda. On whooping-cough its action is most striking. He has found from numerous observations that after from two to ten days of treatment the paroxysms of coughing become much less frequent, less prolonged, and less severe, the vomiting diminishes or ceases, and the respiration becomes easier. He has never seen the symptoms become worse after his treatment was begun. The treatment consists in volatilizing the liquid by means of heat in the sick-room two or three times a day. About 3 x. of the liquid are placed in a porcelain vessel and exposed to the flame of an alcohol lamp. It volatilizes almost completely. The patient is allowed to breathe a purer atmosphere for two or three hours between each sitting, but a saucer containing some of the liquid is constantly kept under the bed. Dr. Pernot reports a few cases of pertussis and one of asthma, which illustrate well the action of the remedy, and certainly seem to justify all that he claims for it. Where a porcelain cup and an alcohol lamp cannot be got, a heated fire-brick may be used to volatilize the drug.—*Lyon Médical*, Sept. 23, 1877.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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COMMITMENT OF THE INSANE.

THE proper method of committing lunatics to the asylum is just now the subject of some discussion. The interest which apparently centred in the Dickey case—in which a lady was alleged to be confined in an asylum for years, and without cause—has extended itself so as to involve a question of special legal enactment. The very case in point proves, however, that there is very little, if any, danger of being committed to an asylum without cause. As we have before remarked, the patient was undoubtedly insane, and by the generality of medical men would have been deemed a proper object for asylum treatment. This part of the case seems to be clear enough, notwithstanding the testimony to the contrary of two of the medical experts. The physicians who constituted the original commission were perfectly competent to examine such cases; both were gentlemen of large experience, and one had special facilities for the study of cases of insanity by an experience of several years as medical officer in an asylum. Their diagnosis was confirmed by the medical officers in charge of the asylum to which the patient was sent, and the treatment adopted was in all respects justifiable and orthodox.

It happened, however, that the question of money was intimately associated with the freedom of this patient, and on that account the case became one of judicial inquiry.

The verdict, although scarcely warranted even by the skilful adaptation of the scientific facts brought out in the trial, was nevertheless quite a natural one under the circumstances. A great deal of mystification was thrown upon the question of insanity by the counsel, and the jury simply gave the plaintiff the benefit of the doubt, especially as an endeavor was made to prove that the members of her family had a pecuniary interest in the committal.

That the same routine is not gone through with other cases similar to the one in question. is perhaps so much better for them and for the State. We have no doubt that many such females are now in asylums, and are likely to remain there because they have no friends who may be pecuniarily interested in getting them out, or relatives who for the same motives are interested in keeping them there. But after all, is this a calamity? The very circumstances that a patient has sufficient money and plenty of friends to institute legal proceedings to obtain liberty, implies a capability for a careful guardianship afterwards. The latter was secured in this case. So far, then, as the money element is concerned, the evil corrects itself, and in a case where there was no money, the evil would not as such exist.

We might say, in passing, that the very appointment of a guardian so effectually stultifies the ruling of the court that the case, as a leading one, must certainly have a short life.

The real harm done in this case was the creation of distrust and alarm in the community concerning the methods of committing the insane, causing asylums to be looked upon as the veriest "mad-houses" of old times, and their medical officers as common jailers. Although the possibility of great wrongs in this direction may be allowed, their probability can hardly be entertained with sufficient seriousness to warrant any great concern, either from the people at large, the bench, or the legislature. The laws as they now stand are not perfect, but more is required in the direction of enforcing them than in creating new ones.

It is perfectly absurd to presume that there is no hope for a supposed lunatic when once under asylum influences. There are plenty of safeguards for such an unfortunate, be he rich or poor. The boards of inspection of our asylums, the States Charity Aid Association, and the Commissioner of Lunacy, all stand between the patient and the medical superintendent of any of the institutions for the insane. In regard to these privileges, the rich and the poor are on the same level. Cases of doubt do occasionally arise and are duly examined, but the rule is almost invariable that a decision is in favor of the asylum. Miss Dickey's case is a notable exception, but her discharge under the circumstances will hardly be an argument in favor of any change, except that which would necessitate the existence of a jury of experts for such trials. In fact, this is the only way in which a reform could be effected regarding the protection of persons committed to asylums. There would then be no chance of misunderstanding the true significance of the medical testimony offered on either side, and no reason to doubt the ability of the jury to draw just conclusions. If such a jury had tried the case in question there is but little doubt as to what the verdict would have been. Although the idea of a jury of experts is by no means new, it has recently gained in currency by the admirable paper of Dr. M. A. Pallen, on "Insanities in

Females."* He made the suggestion that such a court or jury of experts should be formed for the trial of all cases of insanity. Although the plan suggested is good, it is not practical. We cannot suppose that every case of insanity is a doubtful one and needs such inquiry; and if it did, how could time be obtained or opportunity gained to look after the multitude of cases in our asylums? The truth is, we must allow that but a very small proportion of these cases are at all doubtful, and still fewer would demand more than the ordinary safeguards which are now already thrown around them. This is a broad statement, it is true, but one which is amply borne out by experience of medical men in our asylums. The present bill before the legislature contemplates such a provision; but so far as it has an application to every insane person in an asylum, just so far will it be unpractical and defeat the real object for which it should become a law. Such reforms overreach themselves. Let us have a jury of experts, a lunacy commission, to pass judgment upon doubtful cases, but let their work be confined to such cases only. They will then not be overburdened, and all the requirements of ordinary justice will be met. The necessity for this jury is not only apparent in the case of Miss Dickey, but will be equally so in similar ones, the trial of which may be conducted in a like manner. The fact is, the jury under such circumstances cannot expect to obtain absolutely impartial expert testimony so long as such experts are retained by the respective parties in the suit. It is expecting too much of ordinary human nature to rule out the possibility of a mental bias in favor of the side represented. This may be expected of an ordinary witness, when it should never be entertained of an expert. Under the circumstances, the two situations are not convertible, or at least should not be.

THE CASE OF EX-SURGEON-GENERAL HAMMOND.

THE Committee on Military Affairs in Congress, to whom was referred the bill for the relief of Dr. William A. Hammond, late Surgeon-General of the Army, has made a favorable report thereon, and recommend its passage. This is a bill which provides that the President shall be authorized to review the proceedings of the court-martial convened by Special Order No. 24, War Department, A. G. O., Washington, D. C., January 16, 1864, and by which W. A. Hammond, then Surgeon-General of the Army, was tried, and to annul and set aside the finding and sentence of said court-martial, approved by the President, Aug. 18, 1864, if, after such review, the President shall deem it proper so to do. In the event of the latter, the bill further provides that the President shall be authorized to place Dr. Hammond's name on the retired list of the army as Surgeon-General without pay or allowances, past, present, or future.

The circumstances attending the trial of Dr. Hammond are still fresh in the minds of the profession of the country, and no detailed reference thereto is necessary. The impression at the time was, that the charges were made more for political than for other purposes, and the ability of substantiating them was very generally doubted. The very satisfactory manner in which the medical department of the army was managed, the many important reforms which were initiated by him, and their subsequent brilliant consummation, strengthened such an opinion. It was a matter then of general surprise that he should have been found guilty of the charges, and much more so that he should have received such a sentence. That such a view was fully justified, subsequent events now prove, for, after many years, when an appeal is made from the terrible verdict, the committee of Congress make this explicit and gratifying statement:

"A careful, unbiassed, and searching scrutiny of the evidence adduced upon the trial, as presented and reviewed by Dr. Hammond, as well as mature consideration of the argument of the distinguished counsel who represented Dr. Hammond on the occasion of his trial, forces irresistibly the conclusion that the gravamen of all the charges, save one, was either disproved by the defence, abandoned by the prosecution, or eliminated by the findings of the court. The single charge of which the gravamen was not found wanting by the court, was in itself trifling if not frivolous, and certainly insufficient in character and importance to arraign, try, convict, and pronounce sentence thereupon, in the manner and form as are in the records of the court-martial set forth."

The profession never believed that Dr. Hammond was guilty of corruption in office, or that he committed any offence which could have been considered, under the circumstances, as grave enough to merit his sentence. There were times when his authority overreached itself, when extraordinary measures had to be adopted, but these were generally justified by the exigencies of the situation. At the worst, however, they were errors of judgment which, although amenable to the strict letter of military discipline, were intended to be on the side of the sick and wounded soldier. Such an end would justify almost any means when backed by a conscientious appreciation of the responsibilities of the occasion. The profession has never been backward in giving credit to Dr. Hammond for such intentions, and in judging him accordingly. It is a matter of congratulation that the time has at length arrived when justice can be done him, and some amends can be made for the terrible disgrace under which he has so long suffered. The prompt passage of the bill, and its endorsement by the President, is the least that can be done to remedy a monstrous wrong to a man now proved to be innocent, and to correct one of the many blunders committed during the late war.

* Some Suggestions with Regard to the Insanities of Females, by Montrose A. Pallen, M.D. *Amer. Journ. Obstet.*, April, 1877.

MEDICAL CERTIFICATES IN THE DAILY PAPERS.

THE New York correspondents of some of the medical journals of the large cities here and abroad have devoted considerable space to the subject of medical certificates as connected with the advertisement of certain mineral waters. THE MEDICAL RECORD is very kindly mentioned as the means to the end of the withdrawal of the names in question. There is considerable difference of opinion as to the wisdom of the course which we pursued, and some exceptions taken to the arguments which we offered in favor of our position. Various reasons are also assigned for the stand taken, but none of the real ones are given. We are sorry so much misunderstanding exists upon the various points in this discussion, and take the opportunity of correcting it. We do not care to claim any particular credit for the result attained, and only mention it in connection with the RECORD as showing that, after all, we were on the right side and correctly interpreted professional opinion. We rebuked the practice of publishing or allowing these certificates to be published in the daily papers, claiming that it was undignified, unprofessional, and in direct violation of the spirit of the Code of Ethics. At first we stood alone; the County Medical Society was without the necessary machinery to carry on any work of reform, and there was no tribunal before which the matter could be legitimately brought. The New York Academy of Medicine waited for the County Society, and the latter waited for the Academy. In the meantime the advertising was going on, and many openly declared that the Code was virtually a dead letter, as there was no power to enforce it. Still, the RECORD kept up its protests, asked for the withdrawal of the names, and demanded, in the name of the profession, that a Committee of Ethics should be formed in the County Society, and that the whole matter of medical certificates should be brought before it. The formation of the committee followed, and then its report recommending the withdrawal of the names. In the meantime the gentlemen who had given the certificates took active measures in the matter, and their names disappeared from the advertisement. When the Committee on Ethics next reported through the Comitia, although the names were no longer attached to the advertisements in question, the practice was formally condemned, and the request made that the gentlemen whose names had appeared should officially notify the Committee of their withdrawal. The report was adopted at a full meeting and without a dissenting voice. Due notification of the withdrawal of the names has now been made, and thus the matter has ended. Now if, as some of the correspondents declare, this was all unnecessary, we were wrong from the beginning, the Society was wrong throughout the whole affair, and the gentlemen who wrote the certificates were wrong, not only in heeding the demands, but in acknowledging their error in an official manner. In any event, we do not believe that any respectable medical gentlemen can be found, in this city at least, who would be willing to run the risk of writing medical certificates for publication in the daily papers.

THE CORONERS' BILL.

DR. ISAAC I. HAYES' bill, relating to coroners in this city, has passed the State Assembly and now awaits the action of the Senate. It provides that each coroner shall receive a salary of five thousand dollars per annum in lieu of all fees or compensation. Provision is made for *post-mortem* examinations. When an autopsy is to be made the coroner shall subpœna only one physician to make it. No jury shall be summoned unless the physician shall deem it necessary. The Board of Coroners shall, within five days after the passage of the Act, appoint four physicians, residents of New York, to be called upon for *post-mortem* examinations and medico-legal investigations. The Board of Estimate and Apportionment shall fix the pay of the physicians, but the pay of each shall not exceed three thousand dollars per annum.

In this shape the bill is shorn of most of its purely political elements, which is so much of a recommendation for it. At present the office of coroner is one the pay of which is out of all proportion to the services rendered, and it is time that some change should be made in cutting down the enormous fees.

The salary proposed in the new bill is quite reasonable, but is still sufficient to command the services of good men in all the departments. Each coroner is allowed two thousand dollars extra for office and clerk hire, which is more than sufficient to meet all his probable demands in those quarters; but this is one of those compromises with the evils of our political system which it is impossible to avoid on any work of reform. The amendment appropriating three thousand five hundred dollars for a general clerk is absolutely unnecessary, in fact, is a palpable attempt to create a sinecure for political purposes. But there is no doubt that this portion of the bill will be defeated in the Senate. On the whole, then, the bill is a good one, and is calculated to correct many of the gross abuses connected with the office of coroner.

PRIZE ESSAYS.

THE Prize Committee of the Alumni Association of the College of Physicians and Surgeons, in its present annual report, declined to award the prize to any of the competitors, giving as an excuse therefor, that neither one of the three essays presented was up to that standard of excellence it was the intention of the college to establish. The amount set apart for the purpose was two hundred dollars. From the foregoing facts it is safe to conclude either that the judgment of the Committee is at fault, or that there is not enough of inducement on the part of our best men

to write such essays as may be considered worthy of the reward. The former is by no means so probable as the latter.

There are many faults connected with the Prize Committee system which might explain this in a measure, but when the ground is taken that none of the theses come up to a given standard, there is a significance about the position which must not be lost sight of. That there is not a sufficient incentive on the part of the able men to compete for these prizes is quite evident, if for no other reason than that only three out of the large number of alumni of this college entered the lists. We think, then, that Dr. W. C. Livingston touched the key-note of reform and progress when he moved to increase the prize-fund so that an annual income of five hundred dollars might be secured as a reward for the successful competitor. We have no doubt that this will effect the object for which it is intended. Dr. Livingston very pertinently remarked that such a prize would stimulate the older men to work, men whose time was more valuable than that of fresh graduates, and who could give the results of their experience and researches rather than anticipate such by blind theorizing or useless and impracticable experimentation. Then again, the prize being a large one, and the competition being proportionably active, the honor of being the winner is correspondingly great, and independent even of the pecuniary consideration, will be calculated to stimulate first-class talent.

Reviews and Notices of Books.

A TREATISE ON THE PATHOLOGY OF THE URINE. By J. L. W. THUDICHUM, M.D. 2d edition. Philadelphia: Lindsay & Blakiston. 1877.

IT is nearly twenty years since the first edition of this work earned for its writer a distinguished position among the urinologists of the world. Of late years, though still holding an honored place, its usefulness has been supplemented by the more recent works of German and other English authors. This second edition, therefore, will be examined with interest by all who are interested in its subject-matter. Those familiar with the author's later labors, more especially the ones that have seen the light in the "Reports to the Medical Officer of the Privy Council," are fully aware of the industry and originality that characterize them. These qualities, then, we have a right to expect in the volume before us, and upon consulting its pages we are not disappointed.

After discussing the general characters of the urine, the author considers first its organic ingredients, as urea, kreatine, uric and other organic acids, coloring matters, etc., to the number of twenty or more. The inorganic acids next claim attention, followed by alkalies and alkaline earths, and iron. Then come the substances that appear as abnormal constituents of the urine in consequence of disease. Succeeding these are several chapters devoted to the consideration of various medicinal and other substances, which after ingestion appear in the urine, with methods for their detection and analysis. The whole concludes with a scheme for the systematic analysis of the urine and of urinary calculi.

While the work on the whole is a wonderful collection of useful information—in fact, the most complete in existence on the subject which it treats—there are certain omissions that impair its value to the practitioner. The most important of these is in connection with the quantitative determination of urea. Liebig's method is alone given. This method, when practised with the modifications and corrections rendered necessary under varied circumstances, is doubtless capable of yielding very correct results in the hands of a skilled chemist like the author; but for ordinary clinical purposes in the hands of a physician, the method, when practised with ordinary precaution, is troublesome, and too often deceptive and unreliable. The more convenient gaso-volumetric and gaso-gravimetric methods devised of late years yield much more accurate results in ordinary hands. The author's *penchant* for the invention of new terms and long words has been fully indulged, though not to the extent met with in some of his other writings.

The microscopical features of the urine receive scanty attention.

Reports of Societies.

NEW YORK STATE MEDICAL SOCIETY.

Adjourned Meeting, held in Albany, January 15, 16, 17, 1878.

VICE-PRESIDENT, DR. A. L. SAUNDERS, IN THE CHAIR.

LACERATION OF THE CERVIX UTERI AS A FACTOR IN CERTAIN UTERINE DISEASES.

DR. WALTER B. CHASE, of Windham, Greene Co., read a paper upon the above subject and reported illustrative cases. The position taken by Dr. Chase was, substantially, that laceration of the cervix uteri occurred rather frequently; that it was a condition quite frequently overlooked; and that it was a condition which, when complicating displacement of the uterus, would not recover spontaneously. Operative procedure, therefore, became a necessity.

The paper gave rise to discussion, which was participated in by Drs. Fordyce Barker, H. T. Hanks, and A. Jacobi, as follows:

DR. FORDYCE BARKER, of New York.—Mr. President: I think there can be no doubt that the paper first read by Dr. Emmet, of New York, upon lacerations of the cervix uteri associated with the puerperal state, is one of the most important contributions which has been made to gynecology.

I remember well, when I heard the paper read before the Medical Society of the County of New York, that I listened to it with great interest, and I must say, also, with great surprise. The characteristic pathological phenomena attending this condition I recognized clearly and distinctly, but having seen it in only a few cases, I was surprised because of the enormous number of cases which Dr. Emmet reported as having himself seen.

Soon after I read some statistics given by Dr. H. T. Hanks, of New York, of cases which he had seen in the Demilt Dispensary. Again I was not able to explain, satisfactorily to my own mind, why this gentleman should have seen such a large number of cases, infi-

nitely larger than I had seen in all my life, and that I should have seen so few cases in a similar class of practice.

I subsequently saw a patient with Dr. Emmet, and in that case he demonstrated the accuracy of his description of this class of cases. The patient had a large cervix uteri, one which measured two and a half inches in diameter. It was evidently everted, and the uterus measured between five and six inches in depth.

In pushing up the uterus, or rather pushing up the everted cervix, the size of the cervix diminished fully one-half.

Subsequently, Dr. Emmet operated upon this cervix in the manner he had described, and I was again given the opportunity to measure, and found that the uterus had diminished in depth to about two inches and seven-tenths.

Now, this was a complete demonstration of the accuracy of his description and the correctness of his pathological view.

It then remained to me to account to myself for the fact that I had seen so few cases.

For several years I have been constantly watching for such cases, and in that period of time I have seen, as cases which have first come under my own observation, only two. What is the explanation of this fact? I will give the explanation which I believe is true, and which I think has an important practical bearing.

My experience has been confined mostly to treating women who have had excellent obstetrical attendants during confinement; who have been in good circumstances in life, and had everything at their command which could favor complete restoration from the puerperal period. This has been my experience, with the exception of twenty-three years' service in Bellevue Hospital, where, of course, I attended obstetrically a large number of poor persons, who left the hospital after the puerperal period had passed, and who, having good attendance and rest in the hospital, complete involution was generally secured.

The question, then, arises, does subinvolution prevent cicatrization of the laceration, or is the laceration the primary condition and that which prevents involution of the uterus?

My own conviction is, that it is a pathological condition almost never found in patients who have proper obstetrical attendance, or who have been in circumstances in life which permitted them to secure proper hygienic and medical treatment to effect proper involution of the organ.

This view explains why it is that Dr. Emmet, who sees patients coming from all parts of the United States, most of whom had no medical attendance during the puerperal period, and also why it is that Dr. Hanks, who sees these cases in the Dispensary, say that they are of very frequent occurrence. It may be said in answer to this, that when the laceration is closed by the operation, involution is completed and the uterus restored to its normal size.

I accept that; but I do not consider that it in any way invalidates my theory. That laceration of the cervix takes place very frequently in parturition, I am sure every obstetrician will agree. I believe it is also true that the laceration heals spontaneously in a large proportion of cases, and I think that the appearance of cervix uteri of women who have borne children, in the most of whom cicatricial evidences of former lacerations are found, is a perfect demonstration of the truthfulness of this position.

In a vast majority of cases they get well without an operation. But there is a class of patients who are surrounded by such circumstances as will not permit such spontaneous recovery to take place; they are poor, and their circumstances compel them to rise from their confinements too early: and in a few others, who are not poor and have good medical attendance during the puerperal period, they suffer from pelvic irritation of various kinds, such as pelvic peritonitis, pelvic cellulitis, etc., etc. The effect of all these influences is to prevent union of the lacerated surfaces.

The experience of Dr. Emmet is, that these lacerations are found much more frequent upon the left than upon the right side of the cervix.

The explanation for that is, that left occipito positions occur much more frequently than right; in the proportion of about seven out of ten times the vertex presents.

It occasionally happens that a double laceration is produced, and this may result from some peculiar condition affecting the process of parturition.

Now while I fully agree that a certain class of these cases should be treated, I am compelled to take a position somewhat at issue with the author of the paper when he expresses the opinion that these cases never get well without the performance of a surgical operation.

I believe that some of them may get well without such procedure.

Formerly, that is, before Dr. Emmet read his paper, I used to see cases which were supposed to be granular inflammation, ulceration, or abrasion of the cervix, with enlargement of the uterus, and my experience was, and so it was of a great many others I am sure, that after the application of local treatment to the cervix the size of the uterus was diminished, the appearance of ulceration disappeared, the leucorrhœa stopped, the pelvic pains were relieved, and for a time at least the patient was cured. But in a few weeks some of these patients would return, and upon examination they would be found to be just as bad as ever. In some cases, however, I did succeed in effecting a cure—a complete involution of the organ and restoration of the ulcerated tissue—by placing the woman in a recumbent posture for two or three weeks and making occasional applications of the actual cautery.

Now, the fact that some such cases as these can be cured without a surgical operation is important, because the operation always requires confinement of the patient, and some of them will not consent at all to it. In such cases my method of treatment would be as follows:

In the first place I require the patients to keep the recumbent posture, to use vaginal injections of hot water twice a day, using a gallon or two of water at a temperature of 100°, 101°, 102°, or 103° F., according as they can bear, and besides, put them upon constitutional treatment, by way of the use of the tincture of the chloride of iron, Squibb's fluid extract of ergot, and nux vomica, to promote involution.

The object is to so improve the general condition of the patient as to effect contraction of the muscular fibres of the uterus and restore the deficiency of nerve-force to the patient.

In the course of three or four weeks the uterus—for I now am speaking of a particular case—was reduced in depth from four and three-quarter inches to three and one-eighth inches. The patient was then permitted to be up and about, at the same time wearing a cotton tampon dipped in a saturated solution of tannic acid in water.

I may remark in passing, that I think it is a mistake very frequently committed, to make for this purpose a solution of tannin in glycerine. For glycerine pro-

duces a discharge from the mucous membrane which counteracts entirely the action of the tannin.

From day to day, as I introduced the tampon, I was able to see its size regularly diminished, and after a time the woman was able to dispense with it entirely. This patient has not required treatment since.

Of course, in the class of subjects in which we meet with this affection most frequently, where the disease has resulted from inability on the part of the patient to secure competent obstetrical treatment, or to take proper care of herself during the puerperal period, we have this measure suggested by Dr. Emmet.

I think in these cases it is also important to obtain a complete understanding of the history of the patient.

In the cases which have been published, as yet, there has been no report upon the puerperal condition of the patient during the time when this pathological condition was developed. Such history is very important, and is necessary to establish the truth or prove the error of those conditions I have suggested.

In conclusion, I would simply say that the truth is, that a condition which prevents involution during the puerperal period also prevents cicatrization of lacerated tissues; that the same cause of the lacerated tissues contributes to prevent subsequently any cure of those phenomena due to increased weight of the uterus, and such as reflex pelvic pains, leucorrhœa, displacement from increased weight, and failure of normal support.

I would not say that laceration causes subinvolution, nor that subinvolution prevents the healing of the laceration; but that both are the result of a common cause.

I would ask gentlemen who may meet with these cases to obtain, as fully as possible, the history of the patient during her puerperal period, and my strong conviction is, that it will be found that there is some inflammation of the pelvic organs that prevented involution, or some improper hygienic influence, and that, therefore, the two conditions are a common result of this cause, and do not bear the relation to each other of cause and effect.

Dr. H. T. Hanks, of New York.—Mr. President: I am interested in the paper that has just been read by Dr. Chase, for two reasons: First, because the author of the paper is known to me as a careful observer and a judicious operator. Second, the lesion of which he treats is one which has engaged my attention very constantly for the past five years; having observed a large number of cases, and frequently operated, and as frequently witnessed operations for the same by Drs. Emmet, Peaslee, Thomas, and Lusk.

The general practitioner of to-day does not fully realize, and fails to trace back to their true cause, the serious results which follow as a necessary consequence this accident. As Dr. Barker has remarked, it is but a few years since Dr. Emmet first called the attention of the profession in New York City to the pathological condition and treatment of the lesion.

Those who have listened to or read the two papers which Dr. Emmet has written upon the subject, willingly accord to him the honor of first describing this condition, and suggesting an operation for its relief, since which time hundreds of sufferers from laceration of the cervix in New York City have been relieved. Without doubt the operation has been performed sometimes unnecessarily by some gynecologists, as there are those who would readily account in their own minds for all the evils that flesh is heir to, by a slight laceration of the cervix uteri. It is equally certain that the necessity for an operation is often overlooked by the general practitioner.

Respecting the frequency of the lesion to which Dr. Barker has referred, the statistics which I gave at the time of Dr. Emmet's first paper, were confirmed at the time of his second paper by the statistics of Dr. Mundé, furnished from another and similar charitable institution.

There are three palpable reasons for the greater frequency of this accident among the poorer classes than among those in good circumstances. The first reason will be apparent when I state that I know three physicians in New York City who attend between three and four hundred cases of labor in a year. These must necessarily hasten the labor or apply forceps before complete dilatation has taken place, and, of course, often to the detriment of the mother.

2d. The sexual relations of the poorer classes are not so cleanly nor so healthy as prevail among intelligent and well-to-do people. An erosion or abrasion of the cervix previous to pregnancy may be allowed to go on until full term, at which time the cervix is not elastic nor normal, but congested, friable, and easily lacerated. Again, a woman may have gonorrhœa during pregnancy, and in such case I do not believe that it is possible for her to have a child without producing more or less laceration of the cervix.

3d. Among those in good circumstances, the patient is usually kept in bed for a fortnight after a hard labor; good nursing is the rule, not the exception; vaginal injections are frequently resorted to; and involution will take place quite satisfactorily, even though there had been a slight laceration. On the other hand, among the poorer classes, from necessity or ignorance, the patient is usually out of bed by the third or fifth day, whether the labor has been easy or difficult—long before involution can have been accomplished or any restoration of the laceration can have begun.

But this condition is still found among those whom we would suppose should have had the best care and attention, and is the cause of much pain and distress which can be accounted for by no other reason.

It was only this week that a lady, who had been attended by an excellent accoucheur, consulted me for profus emenorrhagia, exhausting leucorrhœa, and long-continued distressing backache. I found, on examination, the uterus prolapsed to second degree, measuring three and a half inches, and sharply retroflexed; a bilateral laceration of the cervix to the vaginal junction, with hypertrophied, red, eroded, and everted edges.

These symptoms had been present since the birth of the last child, one year previous. The only satisfactory explanation of this pathological condition of the uterus is, that the laceration took place at the birth of the last child; proper involution did not follow; the uterus remained heavy; the ligaments continued relaxed, and the fundus fell backward and downward.

The menorrhagia resulted from the congested and increased surface of the mucous membrane; the leucorrhœa from the congested, eroded, and lacerated cervix: the backache from the stretched ligaments.

I believe it is our duty to study for the prevention of this laceration as much as its treatment. We cannot be too judicious in refusing to hasten labor before the cervix is dilated.

When unavoidable laceration, to our knowledge, has taken place, we can avert many serious results by keeping the patient in a prone position for a portion of the time. Frequent vaginal injections of carbolized warm water should be used. The patient should be

kept in the horizontal position for from two to four weeks, or until involution has fully taken place.

Dr. A. Jacobi, of New York.—I believe I am one of those who are expected to have nothing to say upon this special subject, because I am but one of the general practitioners who have assembled here. We are, most of us here, general practitioners, and the important question is to be decided whether every case of lacerated cervix, as the paper under discussion appears to indicate, should go into the hands of specialists? It is as a general practitioner that I mean to say a few words. Now, my friend Dr. Hanks has said "I believe" a number of times during his short speech. I shall try not to use those words a single time. Imagine, for instance, that you have to deal with some kind of wound, say an open wound in the angle of the mouth—what will become of that wound? If it is kept clean, it will heal in a brief space of time. But imagine that you have to deal with such a wound in the mouth of a tobacco-chewer, or in the mouth of a diphtheritic patient, or in a child suffering from stomatitis—what will become of it? Within two or three days we shall see an ugly-looking sore; there will be swelling in consequence of increased cell-growth and exudation from the blood-vessels; as a result of absorption by the lymph-vessels, there will be swelling of the cheek and the neighboring glands, and the wound does not heal. It may cicatrize spontaneously within from two to six months, and when it has closed a large portion of the swelling of the cheek will, it is true, disappear, a large amount of the glandular-swelling will subside, but a certain portion may never disappear.

This is the case, because we know that in the course of time the hypertrophy of the glands and the newly formed connective tissue will not be reabsorbed.

When we cut through such an enlarged gland, we find that it is simply a mass of indurated connective tissue that will remain permanent.

This condition has been developed because the wound was not kept clean from the beginning; it had no chance to heal.

Every such wound or erosion will follow the same course, because it is governed by the same physiological and pathological laws. Almost every woman who bears children has one laceration of the cervix uteri. Most of these lacerations heal, and the uterus is again perfectly healthy.

But, imagine that the woman does not keep the vagina and cervix clean when in the puerperal condition; the discharge from the uterus and vagina will keep such a laceration from healing.

When it does heal, if it does, it is an innocent affair, unless the wound has extended into the peritoneum.

If it does not heal, why not? It does not heal so long as there is the slightest external irritation. When it does not heal, the result is swelling of the parts adjacent; there is metritis; also enlarged uterus and parametritis in a great many cases, and it is for the same reason that there is glandular and connective-tissue enlargement in the neighborhood of the ear when there is an unhealed fissure at the angle of the mouth.

What can an operation for cure of the laceration do in such cases? It will remove the ulcerated surface; that is good. It will heal the lacerated cervix; that is good. But if the uterus is increased in size in consequence of the erosion or ulceration, and a great deal of new connective tissue is formed, the glands suppressed and compressed, and uterine catarrh once established, neither the uterine enlargement nor the uterine catarrh will ever get well, no matter whether the laceration is closed or not, unless they are treated and cured separately. It is true that an always new source of inflammation, and an always new source of catarrh is suppressed; and Dr. Emmet, who has first proposed and performed the operation for lacerated cervix, a good observer and successful operator, never appeared to me to obtain more than that.

If the woman keeps the vagina and uterus clean after confinement by having two, three, or four daily injections of simple warm water applied until the lochial discharges cease, it is probable that every laceration, unless it enters the peritoneum, will heal; in the presence of blood and pus it will not heal.

Take, as a further illustration, a common nasal catarrh, which lasts eight to fourteen days and then gets well. But imagine that there are other exposures and new irritation of the surface. In that case, the nasal catarrh may never get well, because new connective tissue is formed, the little glands in the mucous membrane and the membrane itself become swollen, and their enlargement is permanent. If recovery is to take place in nasal catarrh, absolute cleanliness must be maintained.

These little glandular enlargements will never be removed unless the nasal passages are cleansed three, four, five, six times a day with injections of water, and this procedure is kept up for three or four weeks for the purpose of absolute cleanliness. I have not seen chronic nasal catarrh get well under the influence of any merely medicinal applications, or operative proceedings, least of all with strong applications of nitrate of silver; but I have seen it get well by the use of the very mildest applications, and by securing permanent cleanliness, and nothing else.

May not something else be done with regard to the laceration besides the bloody operation, which is very apt to fail at the hands of the inexperienced? For I have operated once for lacerated cervix uteri, and I feel that it may satisfy the exclusive gynecologists to learn that my operation was a failure.

I have not operated since, but I know I have cured a number of this class of cases.

My experience coincides with that given by Dr. Barker in regard to general treatment. The actual cautery I have used a great deal in the treatment of these cases when there is considerable swelling and thickening of the tissues. It will not only destroy the cicatricial surface, but enliven, on general principles, the adjoining circulation, and thus gradually restore the wound. Perhaps I may be permitted to state in this connection, that I was the first to introduce the galvano-caustic into the cavity of the uterus; it was some ten or twelve years ago, and for the purpose of destroying the constantly bleeding remains of a placenta.

Thus I claim, that if anything can be done for the results of laceration of the uterus, the actual cautery will probably do as much as will the bloody operation. When this is performed very late, I claim that under ordinary circumstances the uterus will remain as large as it is before the operation is performed, and that the actual cautery will have a better success, as far as the removal of secondary enlargement is concerned; for it is the principal object of treatment to remove the source of the irritation and to favorably influence the nutrition of the neighboring parts.

This latter result can be obtained in those cases also where there is uterine catarrh with "metritis" or subinvolution, although there be no laceration of the cervix. Many cases where it is present will not be re-

lieved by the bloody operation. Many, where it is and where it is not, will be relieved by the actual cautery.

Excuse me, Mr. President, for consuming so much time; but I thought I would make these remarks, believing as I do that the condition referred to should be treated upon general principles, just as anything else should be.

Every general practitioner should be a sufficient physiologist and pathologist not to take for granted any results without scrutinizing them; and fortunately there are many means to accomplish the same object under different circumstances, as there are "many roads that lead to Rome."

NEW YORK MEDICAL JOURNAL ASSOCIATION.

Stated Meeting, Feb. 15, 1878.

DR. MATTHEW D. MANN, PRESIDENT PRO TEM., IN THE CHAIR.

ON THE USE OF HOT MUSTARD-BATHS IN PNEUMONIA IN CHILDREN.

DR. LEONARD WEBER read a paper upon the above subject, in which, after referring to several forms of treatment that had been recommended, he presented the claims of the hot mustard-bath in the treatment of pneumonia occurring in children. He first learned of that therapeutical agent in 1869. The history of several cases was related in which the disease had occurred in children from four to six months of age; they were regarded as cases of capillary bronchitis and pneumonia; the symptoms were extremely urgent. For instance, in one case the respirations were 72, the pulse 150, and the temperature 103° F., together with marked cyanosis and great restlessness. The baths were used after all other remedies had failed to afford any relief, and the child made a good recovery.

THEORY REGARDING THEIR MODE OF ACTION.

There were two agents in the baths, both of which acted upon the surface:

1. The mustard, which was an irritant to the skin; and,

2. The hot water, which dilated the cutaneous capillaries, thus assisting to increase the quantity of blood thrown to the surface of the body.

This increased blood-supply to the surface relieved in a great measure the congested pulmonary circulation and the overloaded heart.

The baths stimulated the nervous system and also favored the interchange of gases in the blood through the skin.

ADVANTAGES CLAIMED FOR THE BATH.

It was easily prepared; the materials could be readily procured; its action was prompt; there was no danger in applying it.

METHOD OF PREPARING AND USING THE BATH.

The bath was prepared by adding half a pound or a pound of ground mustard to a baby-tub of water, having a temperature ranging from 100° to 105° F. The child was placed in the bath, and, while there, the surface was to be thoroughly rubbed until the skin began to look red, usually from seven to ten minutes, then taken out, wiped dry, and put into a bed previously warmed. No ill effects had been seen by allowing the genitals to remain unprotected. The bath might be repeated as often as every three hours.

In conclusion, Dr. Weber questioned whether the antiphlogistic treatment of pneumonia by the use of cold baths, cold packs, etc., was a method that could be followed with advantage in this country.

DR. WILLIAMS remarked that he had seen fifteen cases of pneumonia treated by means of cold baths and packs, with the administration of whiskey before and after the bath, and the use of a full amount of nourishment. There were only two recoveries, and those patients doubtless would have recovered without any special treatment.

DR. MANN reported a case in which he thought the life of the child was nearly sacrificed by the use of the cold pack. The child was five years of age, and the temperature was most pleasantly and satisfactorily reduced by the use of ten-grain doses of salicylic acid.

DR. WEIR had had some experience in the use of cold affusions in the treatment of pneumonia occurring in children, but the results were very unfavorable; most of the children so treated died.

DR. HUBBARD spoke very favorably of the use of carbonate of ammonia in the treatment of pneumonia. His method of administration was in accordance with a suggestion made by Dr. H. P. Farnham—namely, as an effervescing mixture with citric acid.

A vote of thanks was extended to Dr. Weber for his paper, and the Association adjourned.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from Feb. 24, 1877, *to March* 2, 1878.

ALEXANDER, C. T., Major and Surgeon. Relieved from duty in Dept. of the Columbia, to proceed to St. Louis, Missouri, and report thence by letter to the Surgeon-General. S. O. 38, A. G. O., February 21, 1878.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 2, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.
Feb. 23, 1878....	0	7	75	5	130	61	0
March 2, 1878....	0	4	91	5	98	52	0

NEW YORK COLLEGE OF VETERINARY SURGEONS.— The first annual commencement of this college, under the new régime, took place at Trenor Hall, on the evening of March 2d. After the conferring the degree of D.V.S. upon the graduates, the valedictory was pronounced by Mr. Walton, when Prof. Hammond was introduced, and delivered an address upon "Equine Psychology"—freely translated as horse sense. He commenced by observing that the horse was distinguished among domestic animals for docility and penetrating intelligence. Besides the fact that the equine brain was remarkable for the depth and number of its convolutions, its weight as compared

with the body was comparatively superior. The proportion of brain to body in the horse was 1 to 580; in the ox, 1 to 805. He regarded the horse as the most intelligent of the solipeds, and related numerous anecdotes illustrative of this view, drawing the conclusion that the intelligence of the animal differed only in degree (not in kind) from that of man. Passing to the interesting question of language, he observed that the nightingale produced forty different articulate sounds, and that there was no rational doubt that animals were able to convey very specific ideas to each other by means of sounds. He concluded with some remarks to the graduating class.

THE LATE DR. E. R. PEASLEE.—At a meeting of the New York Pathological Society, the following preamble and resolutions were adopted:

Whereas, It has pleased our Heavenly Father to remove from us by death our distinguished associate, Edmund R. Peaslee, M.D., LL.D., we would hereby express our sincere grief for the loss which we have been called upon to bear, and also record our profound esteem and admiration for his noble deeds and Christian character; and we hereby

Resolve, That in the life, labors, and character of Dr. Peaslee we have a commendable example of industry, usefulness, and Christian manliness, seldom combined in a single life.

Resolved, In the death of Dr. Peaslee the medical profession and society in general have sustained an unusual loss.

Resolved, That we tender to the family of Dr. Peaslee our sincere sympathy in their irreparable loss.

Resolved, That the above be published in the medical journals of this city, and also that a copy be sent to the family of the deceased.

JOHN H. HINTON,
JAMES L. BANKS,
CHAS. K. BRIDDON,
Committee.

ALUMNI ASSOCIATION, COLLEGE OF PHYSICIANS AND SURGEONS.—The committee appointed to nominate officers for the ensuing year made the following report: For President, Dr. William H. Draper, of New York; for Vice-President, Dr. Alexander N. Dougherty, of Newark, N. J.; for Secretary, Dr. Charles Hitchcock, of New York; for Assistant Secretary, Dr. J. N. Bertram, of New York. The report was adopted, and the officers elected. The Board of Councillors, fifty-seven in number, stands the same as last year, with but few exceptions. After the adoption of a vote of thanks to Dr. Bayles, the retiring Secretary, the meeting adjourned. The annual dinner took place at Delmonico's, Wednesday evening, March 6th.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—At a stated meeting, held Feb. 25, 1878, Dr. J. C. Davis read a paper on "Abscess of the Liver." It was maintained that heat did not necessarily indicate the occurrence of abscess of the liver, but that it depended rather upon dryness and moisture, customs of the people, non-observance of hygienic laws, etc. Abscess of the liver was divided into two varieties: 1. That brought about by inflammation of high grade, associated with tropical dyscrasia. 2. That due to thrombosis and embolism. Ulcerations in the intestines were regarded as one of the prominent causes. Theoretically, the explorative puncture was dangerous, but practically, it was not. Treatment by use of the trocar was advocated. Dr. Judson's field of observation had been in Mexico.

"The School of Salernum" was the title of a paper read by Dr. H. E. Handerson. It was an historical sketch of the rise, progress, and fall of that institution of learning.

DR. A. JACOBI brought before the Society the subject of making a *Catalogue of the National Medical Library*, and introduced a resolution making provisions for the appointment of a committee of twenty-five, which should urge upon Congress the propriety of making an appropriation for that purpose.

DR. O'SULLIVAN reported that the Committee on Ethics had been officially notified that all the members of the Society who had given certificates regarding the value of certain mineral waters had withdrawn their names from such recommendations.

UNIVERSITY OF UPSALA.—The King of Sweden has made the University of Upsala a donation of 40,000 crowns, the yearly revenue from which is to be distributed as premiums to young authors of scientific works.

BELLEVUE HOSPITAL MEDICAL COLLEGE.—The Seventeenth Annual Commencement of this institution was held at the Academy of Music, Thursday, February 28th, at 3 o'clock. The degree of Doctor of Medicine was conferred upon one hundred and thirty graduates.

Lieut.-Gov. Dorsheimer addressed the graduates. He remarked that there was but little reason for the selection of such a speaker to a class of young physicians, except that men in his position were called upon to speak on all subjects at all times. Lawyers, he said, did most of the public speaking nowadays. In former times, among the primitive men, one man exercised the offices of physician, clergyman, and lawyer. Afterwards they separated, the priest first, and, finally, the lawyer. If this order was in accordance with the Darwinian theory, it suggested a process of evolution to which further reference at that time might be considered discourteous. [Laughter.] He thought that modern science began with Bacon—a lawyer. For, although Columbus, Galileo, and, indeed, all discoverers, had worked upon the Baconian method, it was he that first announced the law, first showed that it was immutable, and applicable to all departments of thought and inquiry. The Baconian law might be familiarly stated to be this: Study the facts, and go to the conclusion which the facts establish. This simple axiom had changed the whole method of scientific investigation, and had become the rule of what was known as the experimental system of philosophy. He drew a picture of the state of Europe in the days of Bacon, and said: "Dreary superstition brooded over all—over the Church, the Court-house, and the sick-room. In medicine it was held by some that the blood alone gave warmth to the body; by others that it was a humor and the nursery of disease, and the universal nostrum was to get rid of the foul fluid by bleeding the patient. The king's evil was cured by the touch of a royal hand. The epileptics were bewitched, and the insane possessed of the devil. The duration of life was predicted by the stars. Whooping-cough was cured by persuading a dog to eat a hair of the child, and hydrophobia was cured by making the child eat a hair of the dog. There is no department of science which has taken more benefit from Bacon's teaching than yours. Medical science may be said to have begun then. The first application of Bacon's teaching was made by an English physician, William Harvey, who, eight years after the publication of the *Novum Organum*, printed a treatise demonstrating the circulation of the blood. This treatise is an example of the Baconian methods. Bacon himself

could not have demonstrated a fact in physics more strictly in accordance with his own methods." The speaker alluded to the discoveries of vaccination and anæsthetics, and asserted that there was a close bond of sympathy between the medical and legal professions. In conclusion he said: "I have held up to you great examples, not because I think that each of you should seek to equal them. But it ennobles the humblest man, however obscure his life may be, to think that where he walks others have found greatness. There lies before every one of you a work which will demand all the skill and wisdom you can acquire, all the courage and charity with which the lessons of the past can inspire you. You will often need to compose prescriptions more subtle than those you send to the apothecary: to 'minister to minds diseased;' speak the last counsel to ears already dull. Sometimes it will fall to you to gather up and weave together the ties of family, by passion or the treacherous hand of slander torn asunder, and often at the bedside of the dying to bind up the wounds of the living. Within the sacred realm of sorrow you will be what they were in the olden time—physician, lawyer, and priest. At the threshold of your career we all salute you with the wish that you may prove equal to its great demands."

The valedictory was delivered by Lewis C. Wagner, M.D., of the graduating class.

THE AMERICAN VETERINARY COLLEGE.—The annual commencement of the American Veterinary College was held on Thursday evening in the lecture-room of the College of Physicians and Surgeons, Fourth Avenue and Twenty-third Street. Seated behind the railing were the Faculty and Trustees of the institution, together with a number of distinguished medical men, among them Prof. John C. Dalton, who made the address of the evening, and Prof. J. W. S. Arnold, of the Medical Department of the University of the City of New York. S. Marsh, President of the Board of Trustees, presided. From the report of the collegiate year 1877–8 it appears the college is in a prosperous condition, and that it has been decided to extend the course of instruction necessary to graduation, so as to secure three years of study instead of two, as heretofore. The degree of D.V.S. (Doctor of Veterinary Surgery) was conferred by the President of the board, on behalf of his colleagues, upon the six members of the graduating class, to wit: John Frost, Winchester, Mass.; Alfred H. Rose, of New York; John H. Schmidt, New Jersey; Samuel E. Field, New York; John C. Force, New Jersey; and William H. Wray, New York. The prize for proficiency—a handsome case of surgical instruments—was awarded to John Frost. Prof. Dalton was then introduced, and read a short address on the responsibilities of the veterinary surgeon, the important contributions to physiology made by veterinary colleges, and the best methods of practice, concluding with an anecdote in ridicule of the routine doctor. Prof. J. W. S. Arnold followed with a written address of considerable length, in which he pointed out the facilities for investigation open to veterinary practitioners.

COMMENCEMENT OF THE COLLEGE OF PHYSICIANS AND SURGEONS.—The seventy-first annual Commencement of the College of Physicians and Surgeons, and Medical Department of Columbia College, was held at Steinway Hall, Friday evening, March 1st. Nearly every seat in the body of the hall was filled, and the galleries and boxes were fairly crowded. Prof. Alonzo Clark, President of the college, conferred the degree of Doctor of Medicine upon one hundred and nine graduates. He then delivered his address to the graduates. It was filled with the practical and advisory maxims that govern every successful professional career. Among other things he advised the graduates to cultivate a public spirit, and to be active in all measures of sanitary and other reform, but to avoid politics and to deny themselves to all offers of political emolument.

The award of prizes, by Prof. Markoe, followed directly upon the address to the graduates. The first award was that of the diplomas of examination honors to the ten members of the class who, in their examination before the Faculty for the degree of Doctor of Medicine and in their graduating theses, had shown the highest proficiency. Each recipient of such a diploma is entitled to appear at a special public competitive examination in writing for the three examination prizes. The following members of the class came forward as their names were called, and received their special diplomas: John S. Aitkin, Talbot R. Chambers, Edward Fridenberg, Richard J. Hall, Ellsworth Elliott Hunt, Alexis M. Low, Edward G. Manpin, William D. McKim, Charles D. Sarder, Isaac Weil. The first examination prize of $100 for general proficiency was awarded to Richard John Hall, the second of $50 to Isaac Weil. The third prize of $25 was awarded to two candidates, Edward Fridenberg and Ellsworth Elliott Hunt. The Committee of the Alumni prize of $500 for the ablest thesis, and that of the Joseph Mather Smith prize, announced that none of the theses offered had been of sufficient merit to justify an award. Charles D. Scudder delivered the valedictory, and Charlton T. Lewis, Esq., addressed the graduates.

UNIFORM MEDICAL EXAMINATIONS.—A bill is before the House of Commons, Great Britain, for providing a uniform test for admission into the medical profession in England, Scotland, and Ireland.

ELECTRICITY IN THE OPERATING-ROOM.—At Guy's Hospital both surgeries and the operating theatre are now connected direct with the electrifying room, so that the surgeon may have the current at his disposal at any time when he may require it. He presses a small stud, which rings a bell in the electrician's room, and points out on an indicator where the current is required. The latter is then turned on without loss of time. At night the operator can obtain the current by the simple movement of a spring, the indicating apparatus in the battery-room registering the fact, and also betraying the negligence of the operator if the current is not turned "off" when not required. The arrangements are complete, and work satisfactorily, and Mr. Seymour contemplates carrying them out in the medical wards, so as to avoid the necessity for shifting heavy batteries to that part of the hospital where the current is required.—*Dublin Press and Circ.*

TRICHINOUS DISEASE has made its appearance in South Bend, Indiana. Three cases have died and fifteen others with the disease are not expected to live.

THE CALIFORNIA STATE MEDICAL SOCIETY.—The annual meeting will be held at San José, Wednesday, April 17th.

HOMŒOPATHIC SYMPTOMS.—The encyclopædia of Pure Materia Medica (Homœopathic) gives a list of 3,115 symptoms produced by lycopodium.

THE LATE DR. WILLIAM STOKES.—The number of *The British Medical Journal* for February 2d contains an excellent portrait of the late Professor Stokes, of Dublin.

THE OVERCROWDED PROFESSION.—In the "Sentimental Journey," Lawrence Sterne says: "They order these things better in France." The following advertisement from a recent number of *Le Progrès Médical*, offers a striking contrast between the state of the medical profession in France and here: "VACANCE MÉDICALE.—La Commune d'Anville (Popula. 1270 h.) demande un médecin. Elle offre beau logement gratuit pendent quatre ans. S'adresser, etc."

Here is a community which probably numbers 5,000 souls (1,270 men), advertising for a doctor, and willing to furnish him good lodgings four years gratuitously. In this country the same number of souls is supplied with fifteen or twenty medical men. The above requires no comment.

ANTISEPTIC VINEGAR.—The following is the formula for the antiseptic vinegar prepared by M. Pennés, of Paris:

Salicylic acid	300 grms.	(℥ xss.)
Acetate of alumina	300 "	(℥ xss.)
Concentrated alcoholic solution of eucalyptus globulus	1,000 "	(Oij.)
" " " vervain	9,000 "	(Oxviij.)
" " " lavender	1,000 "	(Oij.)
" " " benzoin	100 "	(℥ iijss.)
Acetic acid at 8° (Cent.)	1,000 "	(Oij.)

Mix carefully, shake often during two or three days, and filter to preserve.

This vinegar may be used as a lotion, either pure or diluted with water. Five quarts injected into the carotid has preserved a corpse perfectly for several months. As a disinfecting and antiseptic agent it may be employed in the form of spray.—*Le Mouvement Médical*, Sept. 15, 1877.

CHILDREN'S HOSPITAL OF THE DISTRICT OF COLUMBIA.—The seventh annual report of the Children's Hospital of the District of Columbia shows 122 admissions for the year 1877, which, with the 35 patients who were in the hospital at the beginning of the fiscal year, December 1, 1876, gives an aggregate of 157. Of these, 83 were discharged cured, 20 improved, 2 unimproved, and 18 died, leaving 34 inmates at the opening of the fiscal year current. Of the admissions, 73 were white and 49 colored; 68 male and 54 female. The number of dispensary patients during the year has been 766, of whom 379 were white and 387 colored; 367 male and 399 female. The daily cost per capita of the patients occupying beds in the hospital during the year has been only 58 cents, certainly a most complimentary exhibit for the management, and one which is commended to the consideration of boards of pauper hospitals in all parts of the country. The number of operations performed during the year has been 48.

BALTIMORE MEDICAL AND SURGICAL SOCIETY.—The following officers were elected at the Seventh Anniversary Meeting of the Baltimore Medical and Surgical Society: President, Dr. Wm. J. McDowell; 1st Vice-President, Dr. A. Friedenwald; 2d Vice-President, Dr. J. J. Caldwell; Recording Secretary, Dr. George H. Rohé; Corresponding Secretary, Dr. B. F. Leonard; Reporting Secretary, Dr. G. Lawson Wilkins; Treasurer, Dr. Wilmer Brinton.

THE MINUTE STRUCTURE OF RED BLOOD-CORPUSCLES.—In the November and December number of the London *Microscopical Journal* is an article on the above subject, being a notice of an article by Professor Boettcher, and published in the *Archiv für Mic. Anat.*, Bd. 14. Prof. Boettcher claims to have demonstrated the presence of a nucleus in said corpuscle. His method of work is as follows: "He makes use of a saturated solution of corrosive sublimate in 96 p. c. alcohol, and into about 50 volumes of this solution one of blood is to be rapidly diffused. By this means the corpuscles are deprived of their hæmatine, and their internal structure made clear. At the same time they are preserved and bleached. The mixture is frequently agitated, and in about twenty-four hours the corpuscles are allowed to subside and the superincumbent fluid poured off, and pure alcohol added. By frequent agitation for another twenty-four hours, the corpuscles are thoroughly washed. The alcohol is then poured off and clear water added. In a short time the corpuscles will be seen, as a nearly white layer, at the bottom of the vessel. By straining these with different fluids, Prof. Boettcher claims to be able to find three classes of red corpuscles. First, homogeneous and shiny throughout. Second, added to a homogeneous, shiny cortical layer is a granular mass in the interior, which takes the straining fluid readily. The third has the same cortical layer and protoplasm, but enclosed in the latter is a nucleus and nucleolus."

At the "Physiological Laboratory," University of Michigan, Dr. C. H. Stowell has demonstrated this structure in the manner given above. The specimens were shown to his classes in histology and to different members of the Faculty. Carmine was employed as the staining fluid.

The majority of the corpuscles were "homogeneous and shiny throughout," while some had enclosed within them a sharply defined nucleus, it being very rare to find one possessing a nucleolus also. There was a marked difference between the appearance presented by a corpuscle with a nucleus, and by the refraction of a "cup-shaped" corpuscle. By establishing a current through the field, the one appearance could not be mistaken for the other.

POPULATION OF BRITISH INDIA.—The territory subject to the British administration in India comprises 909,834 square miles, with a population of 191,065,445 inhabitants. The native states comprise 573,052 square miles, with 48,233,978 inhabitants. Including the French and Portuguese possessions, the entire superficial area of India is 1,484,150 square miles, with a population of 239,978,595 inhabitants. The 191 millions of inhabitants in British India are divided as follows among the different religious sects: Hindoos, 131,843,820; Sikhs, 1,174,436; Mohammedans, 40,867,125; Buddhists, 2,832,851; Christians, 897,682; others, 5,417,304; and 552,227 whose religion is not known.

NEW YORK EAR DISPENSARY.—During the past year there have been treated at this institution eight hundred and seventy-four cases of ear disease, a marked increase over that of any preceding year. The charity is well managed, and deserves its prosperity. Dr. Samuel Sexton is the surgeon in charge.

TRACHEOTOMY IN FRANCE.—In the Hospital St. Eugenie, of Paris, 2,312 operations of tracheotomy were performed during twenty-two years, with 509 recoveries. In the hospital for sick children, in Paris, 2,351 patients were operated upon in twenty-five years, with 614 recoveries. In all the hospitals of France, collectively, the average recoveries are 30 per cent.

TREATMENT OF BURNS.—The local application of a saturated solution of bicarbonate of soda in the treatment of burns is steadily growing in favor.

CHEAP MEDICAL SERVICES.—The British physicians are complaining against the growing custom of cheapening medical advice.

Original Lectures.

DISEASES OF THE ALIMENTARY CANAL.

LECTURE DELIVERED

By AUSTIN FLINT, M.D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE AND OF CLINICAL MEDICINE IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE.

(Reported for THE MEDICAL RECORD.)

SPORADIC DYSENTERY—INDICATIONS IN TREATMENT—TREATMENT WITH IPECAC—IMPORTANT PRINCIPLES AFFECTING THE DIET OF THE PATIENT AND THE USE OF OPIUM—EPIDEMIC DYSENTERY—VALUE OF OPIUM AND ALCOHOL IN ITS TREATMENT, AND THE DEGREE OF TOLERANCE SOMETIMES SEEN IN THEIR USE—CHRONIC DYSENTERY—SUBACUTE ENTERITIS—CHRONIC ENTERITIS—SUBACUTE GASTRITIS.

GENTLEMEN:—The first question we shall consider to-day is the treatment of acute dysentery. It is very desirable, in making observations with reference to the effect of remedies in the treatment of any disease, to determine if there be any intrinsic tendency in that disease towards recovery. This knowledge can never be obtained by observing cases which are under potential medicinal treatment. Some years ago it occurred to me that, to my knowledge at least, this observation had not been made with reference to acute dysentery. I therefore resolved to collect, as far as possible, cases in which no treatment of any activity had been resorted to, and to study them analytically. I found this to be a somewhat difficult task, for many patients had acute dysentery associated with other diseases, and many cases had received treatment before entering the hospital. I succeeded, however, in collecting *ten* cases in which the disease was allowed to pursue its course without interference. A report upon these observations was published in the *Am. Journal of Med. Sciences* for July, 1875, and the result of the analysis of those cases was as follows:

In no case did the disease prove fatal. The duration of the disease, from the time the diarrhœa began up to the date of convalescence, varied from 6 to 21 days—the shortest 6, the longest 21. In one case diarrhœa existed 14 days before the dysentery occurred.

If we exclude the last case, it is found that the average duration of the disease was 10⅛ days, or, with the last case, 11⅛ days. It has seemed to me that these cases, although the number is not large, establish the fact that acute dysentery is a self-limited disease. I do not think that very much would be gained by repeating these observations and collecting a larger number of cases. Here, then, we have a disease which has a natural tendency to self-limitation, and, in that respect, it corresponds with the essential fevers. But it does not follow, because we have a disease which, if left to itself, will either prove fatal or cease at a certain time, that we are not to employ treatment, for by treatment we may abridge the duration of the disease, mitigate the suffering of the patient, and conduct the case more happily and more pleasantly to a favorable termination.

In the first place, then, we will consider the indications in the treatment of a case of sporadic acute dysentery. What are the objects to be kept in view? The first indication is to effect a complete evacuation of the alimentary canal, provided that has not already been accomplished by a spontaneous prodromic diarrhœa. You can ascertain whether or not the intestinal canal has been completely evacuated by inquiry concerning the quantity and character of the dejections, and by manual exploration of the abdomen. We can explore the colon externally very satisfactorily, throughout the greater part of its extent, and in that manner ascertain whether it is full or empty. You are to be guided, then, with reference to the first indication, by the character and the number of evacuations and the quantity of matter evacuated, and by the results of manual examination of the colon.

If we have reason to conclude that fæces are retained in the large intestine, it is a rational procedure to first take steps to secure a complete evacuation of such an accumulation. This may be done by the use of various remedies. Castor-oil is a remedy which has long been employed, and is one well suited to meet the indication in these cases. Salines have been used for the same purpose, and perhaps are to be preferred, because they are far more easily taken, and afford more relief. Having fulfilled the first indication, what is the next? Upon the general principle that an inflamed organ should be kept at rest, the next indication is to keep the inflamed intestine perfectly quiet. How is this to be done? It is best accomplished by the use of opium. These are the two objects to be attained in the treatment of sporadic dysentery.

There is another principle of treatment applicable to certain cases of sporadic dysentery, but still more so to those cases embraced under the epidemic form of the disease; and that is, to render the system tolerant of the local affection. In all diseases which involve more or less constitutional disturbance and tend towards a fatal result by exhaustion, if we place the patient under the influence of an anodyne, assuming that the effect of the anodyne is good, that it does not produce nausea or disturbance of the digestive system by idiosyncrasy, we render the patient better able to support the affection; there is less constitutional disturbance than would be the case if the drug were not employed. By rendering the patient free from uneasiness and promoting sleep, we diminish the tendency to fatal result, if there be any such tendency by way of exhaustion. Opium, in the treatment of dysentery, may be administered by the mouth, by the rectum, or hypodermically. Perhaps we succeed better in securing quietude of the large intestine by the use of anodyne enemas than by the use of opium, either by the mouth or hypodermically—the effect upon the large intestine seems to be more direct. After a day or two it may be found that the alimentary canal is again more or less loaded, and, if deemed necessary, the salines or the oil can be repeated. From time to time various methods have been recommended as extremely efficacious in the treatment of this disease. Accordingly, large and small doses of calomel have been used; salines, various kinds of injections, applications of cold and heat, etc., etc., have been suggested; but the more recent plan of treatment is that recommended by Dr. McLean, and consists in the use of *ipecac*.

I have been led to employ this plan of treatment in a certain number of cases. It is recommended by Dr. McLean to administer twenty-five or thirty grains of powdered ipecac—preceding it for a little time by a full dose of laudanum. If the ipecac be retained, it is to be repeated in diminished doses every eight or ten hours.

I have seen this plan of treatment employed in quite a number of cases, and I must say that it sometimes

has a very marked effect upon the disease. At the same time, I should say that, according to my experience, without giving accurate data, in the larger proportion of cases the ipecac treatment fails. There is no objection, however, to making a trial of the remedy, because it will do no harm if it do not succeed.

The *diet* for this class of patients should be restricted, theoretically at least, to those articles of food which are as completely digested as possible. This is done upon the principle of keeping an inflamed part at rest. Our object is to prevent, as far as possible, the exercise of any function by the large intestine; that is, we administer nourishment which leaves but little residuum to pass into this portion of the alimentary canal. Cold water and ice applied to the rectum sometimes relieves the tenesmus. Warm, soothing applications over the abdomen usually afford a certain measure of relief.

In 1874 I received a letter in which is given an account of the personal experience of a gentleman with reference to a rather novel way of treating dysentery. He was encamped in the army four miles from Washington. He had suffered severely from pain and tenesmus, as well as frequent mucous and bloody discharges from the bowels, for forty-eight hours, and was greatly exhausted. He was unable to retain much food upon his stomach, and because of his irritable stomach had abstained from food for nearly eighteen hours. About that time an old negro came into camp, peddling oysters, and they were prepared and eaten with vinegar and salt. He says he felt a craving for this article of diet with its accompaniments, and that he ate freely of the oysters, and having heard an old physician say that vinegar and salt was an excellent remedy for dysentery, he gave them plenty of that kind of dressing. He writes that he was almost at once perfectly relieved, and that that was the last of his dysentery for that year. He also writes that he had frequent opportunities to recommend the same plan of treatment in his own and other regiments, and that it had uniformly been attended with the same success.

There is no reason for discrediting the story which the gentleman relates, and certainly, from the writer's standpoint, the plan of treatment is somewhat novel. It is not probable, however, that the oysters produced any special benefit; nor is it any more probable that the vinegar and the salt taken with the oysters produced any special remedial effect. But there is involved in the case a principle, which is perhaps worth mentioning. If we can find an article of diet which the patient desires and craves, and it can be taken and digested and assimilated, we benefit the patient by allowing him to have it, and also exert a controlling influence over the disease. This is the point which I wish to impress upon you. We are to be guided, to a certain extent, by the instincts and desires of the patient, and I am willing to say that, in almost every disease, if the patient has a well-defined desire for any article of food, it is wise to allow it to be taken. We are much safer in following the instincts of the patient, in this respect, than in following out any set of dietetic rules with theoretical form. I cannot but think, that adopting the same general dietetic rules and endeavoring to apply them to every case, is harmful.

TREATMENT OF EPIDEMIC DYSENTERY.

Next, with regard to treatment of the severer cases of dysentery which are usually epidemic, especially that form in which we have a history of early and abundant sanguinolent transudation, accompanied by marked prostration. In severe cases of epidemic dysentery, we have to deal with a very formidable disease. What are the indications in its treatment? In general, purgatives are to be avoided. Salines, which operate by producing a more or less abundant watery transudation, are contraindicated.

So far as medical treatment is concerned, our chief reliance must be placed upon opium. Administer opium early and persistently, and to the extent of absolutely quieting the intestines, but at the same time avoiding the risk of narcotism. It is a noteworthy fact that the quantity of opium which can be administered in these cases, without exposing the patient to danger from overuse of the drug, is sometimes very large.

We are to take into account the fact that, in certain cases at least, there is a wonderfully increased tolerance of opium. For example, I have given a patient, suffering from epidemic dysentery, a grain of the sulphate of morphia every hour—24 grs. per diem—and continued such doses for several days without producing the least manifestation of narcotism; and the patient was a person not accustomed to taking opium. That was an extraordinary case, it is true, but I have been repeatedly led to observe a greatly increased tolerance of opium in this class of cases.

Astringents may be administered, provided they are well tolerated by the stomach, with a certain amount of benefit—not marked, however—but they should never displace the use of opium.

Supporting measures must also be employed, and with regard to alcoholics, the same is true as with reference to opium—there is an increased tolerance. We cannot go too far, in severe cases of epidemic dysentery, in the use of alcohol, if we do not carry it beyond its supporting effect, and the life of the patient may depend upon its use. The persistent use of opium and alcoholics is the most essential feature of the treatment of epidemic dysentery. If the disease be associated with other affections, additional indications may be derived from the latter. For example, if the disease be associated with malaria, the use of quinine is indicated, and other indications may be developed by complications with other diseases.

CHRONIC DYSENTERY.

Our next subject is chronic dysentery. In our climate we rarely see a case of this disease. It is essentially a disease of the tropical climates. With regard to sporadic and epidemic dysentery, as it occurs in this climate, there is scarcely any tendency to the supervention of the chronic form of the disease, whereas in tropical climates there is considerable tendency to this result.

The distinguishing feature of the dejections in chronic dysentery is the presence of inflammatory products, and our differential diagnosis is based upon that fact. If the dejections are liquid and contain more or less of inflammatory products, we can infer that the affection is extensive; that it affects a greater part or the entire large intestine. If the patient has regular fæcal evacuations, and between them discharges of inflammatory products, it may be inferred that the disease is located in the lower part of the bowel. With the characteristic dejections there is generally more or less of progressive emaciation. If the disease is extensive, extreme emaciation is commonly developed.

It is important to make a correct diagnosis in these cases, but in hospitals it is not always made with accuracy, nor is it always easy to make a discrimination between chronic dysentery and chronic diar-

rhœa, the disease with which chronic dysentery is most frequently confounded. Chronic diarrhœa is a much less grave affection than chronic dysentery.

What are the indications for *treatment in chronic dysentery?* There are several remedies which have been supposed to produce a beneficial effect through their local influence upon the inflamed part. We have the nitrate of silver, sulphate of copper, and bismuth in large doses, which are supposed to exert a favorable influence by coming in direct contact with the inflamed mucous membrane. With regard to nitrate of silver and sulphate of copper it seems to me that it is simply an error to suppose that any doses of these remedies which the stomach will tolerate can be taken and pass through the stomach and small intestine and then act as local remedies upon an ulcerated surface in the large intestine. Whatever effect these remedies produce must be explained in some other way. It is easier to understand that bismuth, given in large doses, and continued regularly, may reach the large intestine and produce some local effect.

Bismuth is a palliative remedy and one of considerable value in the treatment of chronic dysentery. Not infrequently it diminishes the frequency of the dejections and the abundance of the inflammatory products which they contain. It is a remedy which can be given almost *ad libitum*. It is a remedy which frequently is given in too small doses to produce any curative effect. We should rarely give less than ℈i., and from ʒ ss. to ʒ ij. may be given without producing other disagreeable effects than the inconvenience which may arise from its bulk in the stomach. The various ferruginous and vegetable astringents may be given. They have been regarded by different observers as valuable in the treatment of this affection, and it is our duty to try them in succession.

These patients are to be sustained by tonic remedies and a nutritious diet. The diet should consist of articles which are as completely as possible digested in the stomach and small intestine, thus leaving the least possible residuum to enter the colon. You will be guided largely by the instincts and experience of the patient with regard to selecting articles of diet. More advantage may, perhaps, be derived from hygienic treatment than from any other. A change of climate is a most important element in the treatment of chronic dysentery. I am speaking particularly of cases occurring in a tropical climate. A change from a warm to a temperate or cold climate is beneficial. A uniformly cold and dry atmosphere is best suited to these cases. During the late civil war, and also during the Mexican war, we had occasion in New York to treat numerous cases of chronic dysentery contracted in the Southern States and in Mexico, and the most effectual measure for their relief was a change of climate; a change to even farther North than this city.

SUBACUTE ENTERITIS.

We meet with cases of enteritis which are neither acute nor chronic, but are subacute. Subacute enteritis is not uncommon. It is frequently connected with excessive eating, or with the action of an agent which interrupts the digestive process. Here we have to make a differential diagnosis between this disease and simple functional indigestion. Subacute enteritis is almost invariably induced by dietetic excesses. In accordance with general principles, then, the first thing to be done in the way of treatment is to remove the contents of the small intestine, as is done in the greater proportion of cases by diarrhœa. The alimentary canal is then to be kept quiet by the moderate use of opium, and the diet of the patient carefully regulated.

CHRONIC ENTERITIS.

Chronic enteritis rarely occurs in adults if we exclude the enteritis which is associated with tubercular disease—that form of chronic enteritis which occurs in connection with certain cases of phthisis.

If a patient suffering from pulmonary phthisis has a persistent diarrhœa, one perhaps which can be controlled by opium, but which speedily returns as soon as the effect of the opium passes away, and this continues for some time, we may safely infer the existence of tubercular enteritis, which will sooner or later lead to ulceration. Exclusive of these cases, and exclusive of the ulcerations which sometimes persist after recovery from typhoid fever, chronic gastritis is a rare disease in adults, but common in children. In young children, and during dentition, especially in cities, the cases of chronic enteritis, acute and subacute enteritis are very numerous, and constitute the greater part of the cases known commonly as "summer complaint" and cholera infantum. As these affections more properly belong among diseases of children they will not be studied at this time.

SUBACUTE GASTRITIS.

With regard to subacute gastritis it is a very common affection, and one which exists in a large proportion of the cases which occur so frequently, and to which in this country the name "bilious attack" has been applied. "Gastric embarrassment" is also a name which has boen given to the same condition. The term "gastric fever," a term which should never be used, but one which has received a popular recognition, has been employed by some physicians, and even by some medical writers in describing this disease. The symptoms which characterize a transient and subacute gastritis are loss of appetite, nausea, sometimes vomiting of a considerable amount of mucus, and perhaps bile, more or less of tenderness over the epigastrium, and a certain amount of fever; the thermometer rising as high perhaps as 100 or 101° F., and the pulse increased in frequency. This group of symptoms can frequently be referred to over-indulgence at the table, or to the effect of some agency, mental or physical, which, after the ingestion of food, has given rise to indigestion. The food undergoes chemical change in the stomach, and produces a certain amount of inflammation. This form of gastritis is not severe, and does not, as a rule, call for very active treatment.

It may be proper, if there is suspicion that the stomach contains indigested food, to produce vomiting.

COLORADO AS A HEALTH RESORT.—Dr. Edwin Blokislee, of Golden, Colorado, in a paper with above title, read before the Iowa Union Medical Society, Cedar Rapids, Iowa, lays great stress upon the necessity of slow and gradual journeys to Colorado, whereby the patient can become accustomed to the changes in the atmosphere in his ascent to the Rocky Mountains. He maintains that every hundred miles towards the Rocky Mountains represents an ascent of a thousand feet, and should be travelled slowly. In regard to fulfilling the latter condition, the wagon trains were better than the rapid travel in the rail-car. He prefers Golden to any other situation in Colorado, and advises patients to be sent there in the first stages of the disease.

Original Communications.

LIGATION OF THE LINGUAL ARTERY NEAR ITS ORIGIN, AS A PRELIMINARY PROCEDURE IN THE EXTIRPATION OF CANCEROUS DISEASE OF THE TONGUE.

By GEORGE F. SHRADY, M.D.,

SURGEON TO THE PRESBYTERIAN HOSPITAL, NEW YORK.

THE following case. the substance of which was presented to the New York Pathological Society on the occasion of the exhibition of an epithelioma of the tongue, has probably some points of interest for the surgeon in connection with ligation of the lingual artery near its origin, as a preliminary procedure in the operation for extirpation of the disease.

Marian McD., ætat. thirty-two years, native of England, married, and the mother of four children, was admitted to the Presbyterian Hospital, New York, June 12, 1878, having been sent to me by Dr. D. S. Lyons, of this city. Eight months previously she first noticed an ulceration on the left side of the tongue, about its middle, and adjoining a decayed tooth. The disease gradually extended anteriorly and posteriorly, so that, in the course of the two months following, nearly the whole of that edge of the organ became involved. Soon after, the floor of the mouth was invaded, and, coincident with that complication and the necessary implication of the chorda tympani nerve, the patient, as usual, suffered from neuralgia of the side of the face and ear.

At the time of admission to the hospital the disease extended in the shape of a ragged, angry, indurated and sloughy ulceration from near the tip of the tongue, along its left side, to the depth of half an inch or more, and backward to the reflection of the anterior faucial pillar. The entire inner surface of the gum of the left side was also covered by a fungous, sloughy growth, which overlapped the alveolar margin and extended across the floor of the mouth, being continuous with the disease in the tongue. The mass in the floor of the mouth was limited anteriorly by the frænum, and posteriorly by the posterior limits of the disease in the tongue. Whether or no the disease extended deeper than the submucous tissue could not then be ascertained without causing her a great deal of pain in the necessary manipulation. Certain it was, however, that none of the neighboring glands were involved.

It should be stated, as a part of the history of this case, that the patient had a congenital cleft palate, and also that her aunt, on the paternal side, died of cancer of the breast. There was nothing in the history or the appearances of the disease that indicated syphilis.

The patient was in a very feeble condition, and, aside from a lack of nourishment, was much worn down by the severe neuralgia from which she had suffered for several months. Anxious to be relieved of her suffering, she was willing to submit to any operation which would not directly jeopardize her life. Extirpation of the disease was of course the only measure that suggested itself. The character of such an operation and its probable results were plainly set before her; still she requested that the disease be removed, if with no better promise than a temporary relief from her sufferings. A consultation was held, and an operation was advised.

Desiring to get her in as suitable a condition for operation as possible, she was liberally fed by the rectum and encouraged to take milk and beef-tea by the mouth. The difficulty and pain in swallowing interfered greatly with stomach alimentation, so that the lower bowel was relied on almost entirely, not only for feeding, but for tonic medication.

Having determined to remove the disease entirely through the mouth and at the same time prevent a hemorrhage, which in her condition might have been dangerous, I decided, as a preliminary operation, to ligate the lingual artery of that side. With the view of cutting off not only the blood-supply to the body of the tongue, but also to its base, the lingual artery was ligated near its origin and behind that of the dorsalis linguæ. The patient having been thoroughly anæsthetized, an incision was made upon the left side of the throat, just above and parallel to the greater cornua of the hyoid bone. This incision was about three inches long, its centre corresponding to the extremity of the greater cornua, and its posterior border to the internal margin of the external jugular. The skin, superficial fascia, platysma, and deep fascia were in turn divided, the submaxillary gland exposed and raised from its bed, when the posterior belly of the digastric muscle was brought plainly into view. In the course of the dissection the facial and internal jugular veins, the external carotid artery, the superior laryngeal nerve, and the middle constrictor muscle of the pharynx were exposed, as were also the hypoglossal nerve and the other landmarks. Only one vessel of importance was thus far encountered which required attention, and that was a branch of the anterior jugular vein, which traversed the wound and was divided between a double ligature. After a cautious search behind the posterior belly of the digastric muscle and immediately above the extremity of the greater cornua of the hyoid bone, the lingual artery was found and there ligated. The exact point of ligation was just as the artery passed under the posterior edge of the hyo-glossus muscle. This portion of the operation occupied less than twenty minutes. The pulsations of the artery were distinctly recognized, before the ligature was tied, by all the gentlemen surrounding the operating-table, notably by Drs. Post, Briddon, White, Hinton, Burrall, Hadden, and the members of the house staff.

After the artery was secured by a carbolized silk ligature, a unilateral gag was inserted between the jaws on the right side. The finger was then introduced into the mouth, and an attempt was made to separate the growth from the inner and left side of the lower jaw. This so far succeeded that but little assistance from the scissors was required. When the tumor on the floor of the mouth was separated as far inward as the median line, it was left attached to the tongue. The next step in the operation was the securing of the extremity of the tongue by three strong ligatures, about an inch from each other, the central ligature being through the tip, just to the right of the median line. By the assistance of Drs. Post and Briddon, the tongue was then spread out so that it could be slit with a serrated scissors longitudinally to its base. The base in its turn was then cut across behind the disease, and the entire growth upon the tongue and floor of the mouth removed in one mass. A thorough examination was then made of the mouth, and a small suspicious induration was cut off with the scissors from the stump of the extirpated portion. It was then decided that all the disease was thoroughly removed. As far as the section of the left side of the tongue was concerned, the operation was

virtually a bloodless one, the tissue presenting a comparatively dry and pale appearance. At one place, where the incision extended to the right of the median line, a branch of the ranine artery of that side was cut, requiring a ligature. There was some hemorrhage from the floor of the mouth, particularly in the neighborhood of the frenum, but it was promptly checked by pieces of ice held in the claws of the vulsellum and applied to the cut surfaces.

The edges of the wound in the throat were then brought together by sutures, the ligature of the lingual having been cut short and left to disappear.

The patient rallied well after the operation, and expressed her satisfaction as well as she was able to do, considering the crippled condition of her tongue and the congenital defect of her palate.

The growth was examined microscopically by Dr. Satterthwaite and myself, and was found to present the characteristic appearances of epithelioma.

In the course of the day following the operation patient became easy, and at the end of the third day could swallow water or milk in large mouthfuls without special discomfort. The wound presented a healthy appearance, and in the course of ten days was entirely healed.

Two weeks subsequent to the operation, and during an exceedingly warm night, she imprudently exposed herself to a draft of air, which resulted in a pneumonia of upper lobe of left lung, which disease was accompanied with the symptoms and physical signs of acute phthisis, and terminated fatally in three weeks. Being absent from town during the latter part of July, Dr. Briddon, who was on duty at the time, kindly treated the case to its close. No autopsy was procurable.

As before intimated, the real interest of this case centres in the ligation of the lingual artery. This operation has the reputation of being an exceedingly difficult and dangerous one. The place of election is in the triangle of the digastric muscle, there being in that space no more important artery to encounter than the lingual itself. Outside and behind this triangle the application of a ligature to the lingual is considered too hazardous to be undertaken, on account of the proximity of large veins and arteries, and too difficult on account of the great depth of the vessel in the wound. Although the operation cannot be called a simple one in either situation, it is by no means so difficult as has been claimed. I make this statement with the view of preparing the way not only for the advocacy of the ligation in the ordinary situation, but near the origin of the lingual, behind the triangle, and on virtually forbidden ground. The latter operation, as was performed in this case, should always be preferred, because it cuts off the entire blood-supply of that side of the tongue. On the contrary, a ligature within the triangle is almost invariably in front of the dorsalis linguæ, which artery, in sections of the base of the organ, may give rise to troublesome and sometimes almost uncontrollable hemorrhage. As arrest of hemorrhage from the base of the tongue is as much, if not more, of an object than that from its body, the choice of the two situations for ligation admits of no argument aside from the dangerous proximity to great vessels. But even this should not deter the surgeon who is confident of his landmarks, and who wishes to give his patient the best guarantee against loss of blood during the extirpation of the tongue through the mouth. The extremity of the greater cornua of the hyoid bone is a sure guide for the incision. The latter should be made parallel and just above the bone. Of course the dissection must be carefully made, the proximity of the external jugular to the superficial, and the internal jugular and external carotid to the deeper incisions kept constantly in mind while the extremity of the cornua is pressed upward in the wound. Following these precautions, the artery can scarcely be missed, lying below the submaxillary gland, behind the deep fascia, in the loose cellular tissue just above the cornua, and upon the external aspect of the middle constrictor muscle of the pharynx. At this point the ligature is sufficiently distant from the external carotid on the one hand, and the dorsalis linguæ on the other, to prevent secondary hemorrhage.

Ligation of the lingual is more especially useful when a portion or the whole of the tongue is removed through the mouth. The latter is an operation which, when it can be performed, should be preferred to all others. When the artery is secured, the great objection to this method of extirpation—hemorrhage in an inaccessible and dark cavity—is entirely removed. There is no comparison between the ease of tying the artery from the outside, under the jaw, and deep inside the mouth and during a free hemorrhage.

Another argument in favor of the ligation of the lingual in these cases is based upon the practice of M. Demarquay, who attempted by that means alone to starve out cancer of the tongue. Is it not possible that the cutting off of the blood-supply hinders the return of the disease after the extirpation? This could not be demonstrated in my case, but the probability of its good influences in the direction indicated helped to strengthen the general belief in its utility.

It is well known that various operations have been proposed and performed for extirpation of a whole or part of the organ, but not one is as simple as the removal through the mouth by knife and scissors, after the lingual has been tied as described. It is of course understood, as each lingual supplies the corresponding side of the tongue, that any spread of the disease beyond the median line would involve the necessity of tying both of these arteries to avoid the hemorrhage. Where it is impossible to remove disease by such means from the floor of the mouth or from the root of the tongue, Syme's operation of dividing the lower jaw, as modified by Sedillot, offers the best chances. In case the disease is confined to one side of the tongue, and extends too far back to be reached through the mouth, the section of the cheek, as proposed by Mr. Collis, would, I believe, be less objectionable than the division of the jaw. A scar would be left, but in the male, at least, it could be easily hidden by the whiskers. Regnoli's submental flap has no advantage over Syme's section; indeed it would appear to be useless in the very cases for which it was originally intended, inasmuch as in extensive disease of the tongue, removal through the opening would be difficult if not impossible. Nunneley's operation of introducing a loop of the wire écraseur under the chin and through the mouth, encircling the disease, has its advantages in certain cases, as also Paget's method of dividing the anterior attachment of the genio-hyoglossus; but when these can be avoided—and preference should be given to simpler procedures—it should be done. The galvano-cautery has many advocates, as also the Paquelin cautery, but neither of these leave a clean wound in the tongue nor can they positively guarantee against hemorrhage. In fact, by some authorities, secondary hemorrhage is said to occur more frequently when the galvano-cautery is used than even when the knife or scissors is employed. Surrounding the cancerous mass by a ligature is an operation quite easy to perform, but is attended with great discomfort to the patient afterwards. The same objection applies

to Syme's operation, except in the cases mentioned, when the imperativeness of its performance outweighs all other considerations. In conclusion, as a result of an analysis of the discussion which the presentation of this case has invited, the following propositions may be submitted:

1. In cancer of the tongue, whenever it is possible, the disease should be removed through the mouth.

2. Ligation of the lingual artery is a very necessary preliminary to such a procedure.

3. Ligation of the lingual artery, if performed at all, should be near the origin of the vessel, as by that means the whole of the blood-supply of one side of the tongue is completely cut off.

4. The operation of ligation of the lingual artery, even in that situation, is less difficult than the securing of the vessel in the wound during the operation of extirpation of the tongue, and when there is free hemorrhage deep in the mouth.

5. The distance between the external carotid and the point of ligature is sufficient for the foundation of a firm clot and the prevention of secondary hemorrhage.

6. The use of the scissors and the knife place the wound in a condition more favorable for rapid healing than when the écraseur or any variety of cautery is used.

7. Ligation of the lingual may have a tendency to retard the return of the disease.

38 East Thirty-second Street, N. Y.

A CONTRIBUTION TO THE THERAPEUTICS OF PUERPERAL CONVULSIONS.

REPORTS OF CASES, WITH COMMENTS,

By E. P. HURD, M.D.,

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The metropolitan practitioner has literary, scientific, and professional advantages which his country confrère does not possess; the field of observation and the opportunities of the latter are limited, and hence it is that the great leaders and reformers in medicine have generally belonged to the large cities; they have been men whose time and energies have been largely devoted to hospital and dispensary practice, to whom the chemical laboratory, the autopsy, the dissecting-room have always had marked attractions. Improving their leisure hours in perfecting their knowledge of the human frame and its diseases, they have in due time developed into fit instructors of their less ambitious country brethren, who are too often content to spend their precious leisure at euchre, at croquet, or in the genteel occupation of loafing in the village grocery.

What the busy practitioner most needs is the results of experience, and as far as the life of the country physician is fruitful in practical data, so far he can always command the respectful attention of his metropolitan brother. In the practice of medicine we are ever experiencing the great evolutionary fact of our being—"trial and error, groping and feeling our way, acting somehow, and judging of the result."*

The treatment of puerperal convulsions has taxed the resources of all practitioners, and failure has been quite as conspicuous as success. The old methods of treatment by bleeding, calomel and opium, drastics, etc., are going out of fashion; anæsthesia by chloroform and ether has been proved, above all other remedies, to lessen the mortality in this dire disease. As a contribution to this conclusion (which I regard as one of the most valuable acquisitions of modern therapeutics) the following reports may be deemed to possess some value.

Preliminary to beginning my reports, I wish to recall a statement of Dr. F. W. Gilbert, of Canada, made in 1868, at a medical meeting in Sherbrooke, P. Q.; a statement which made a considerable impression on those who heard it, and especially on me, who had recently lost a patient from puerperal convulsions, in the treatment of which no anæsthetic was used. Dr. Gilbert said that whereas, previous to the introduction to the armamentarium of the physician of ether and chloroform, he used to lose a large proportion of his cases of puerperal convulsions, since he had learned to rely on anæsthetics he had not lost any, although he had had upwards of twenty cases. His method was to use chloroform promptly, boldly, and perseveringly.

Case I.—In 1867, during country practice in D. Patient a primipara, age twenty-four, albuminuric. I arrived while labor was in progress; there had been two or three severe convulsions. Head presenting. I applied long forceps—a dead child. In an hour consciousness had returned, and patient was able to converse. Three hours after delivery another convulsion. Treatment: bleeding, croton oil and calomel purge, enemata, veratrum, and opium (the latter hypodermically). No ether or chloroform. Patient died.

Case II.—In 1868, during my residence in Canada. Patient a primipara, aged eighteen, albuminuric. Had been in labor all day; convulsions every half hour for twelve hours. Os dilated; child delivered by turning. Chloroform was freely administered, and no other medical agent used that I now remember. Patient recovered.

In this case there was no return of consciousness till forty-eight hours after the convulsions had ceased, and patient was in a *new world* for weeks afterwards, having to re-learn almost everything.

Case III.—In 1871. Mrs. R., a resident of Byfield, primipara, albuminuric. Convulsions supervened after delivery of a living child—the most frightful convulsions I ever witnessed; it was with difficulty patient could be retained in bed. Chloroform was administered by inhalation, and chloral (in 10-grain doses) by mouth. The former boldly; in fact, I did not allow my patient to come out from under its influence. When I saw warning of an approaching paroxysm, half an ounce of the anæsthetic was immediately applied on a towel, folded into a hollow cone, to the mouth and nostrils; a thorough narcotism was speedily induced, which soon arrested the convulsive seizure. The towel was at no time completely removed from the mouth of the patient; during the intervals of the attacks the napkin containing a few minims of chloroform was kept a few inches from her mouth. The aim was to annihilate spinal reflex excitability; pulse and respiration being carefully watched. This mode of treatment was pursued for six hours, and for three hours after all convulsive action had ceased. Profuse sweats occurred, which may have aided in eliminating the materies morbi. Patient fully recovered. In 1875 was delivered of a second child, without convulsions.

Case IV.—In 1875. Mrs. W., primipara, albuminuric, with excessive œdema. Labor was progressing finely, with dilatable os, when a violent convulsion came on. I applied ether, and sent home for forceps. The ether promptly allayed spinal excitement; I kept the sponge, saturated with the anæsthetic, near the mouth of the patient for six hours. Delivered her by

* Bain, Mind and Body. S. 79.

forceps of a living child within an hour of the invasion of the convulsive paroxysm. There was no return of convulsions. Perfect anæsthesia was not maintained during all of the long period specified; it was only when warning was given by restlessness and facial spasm of an impending general outbreak that the ether was pushed to its fullest physiological effect; a fair degree of anæsthesia was, however, kept up during the whole period. And here I believe is the secret of the success of the anæsthetic treatment; no timidity must be shown; your ether or your chloroform must be used unsparingly and perseveringly; the erethism of the spine and bulb must be annihilated, or it will annihilate your patient. No other treatment was used in this case. Mrs. W. is still living.

CASE V.—Mrs. I., of Newbury. Was taken in October, 1876, when six months pregnant, with a convulsive seizure; predisposing cause, albuminuria; exciting cause, exposure to cold and wet. Ether was freely administered by inhalation, and chloral given internally. The eclampsia was promptly arrested; premature labor came on, with delivery of a dead child. She made a good recovery.

CASE VI.—Mrs. K., of Byfield. Primipara, albuminuric (as I should judge by the œdema of extremities which was present). Previous habits laborious, farm duties, in consequence of husband's sickness, requiring her constant supervision; often to market, nine miles, in hot sun. Was taken August 23d ult., when seven and one-half months pregnant, with violent headache and eclampsia. The first convulsion was followed by a coma, from which she was never aroused. Dr. R. C. Huse, of Georgetown, was in attendance from eleven o'clock A.M., till her death, a little after midnight. Convulsions all day, with intervals of only about fifteen minutes. No signs of labor till five o'clock P.M.; then pains came on. When I arrived, at nine o'clock P.M., Dr. Huse was preparing to turn the child and deliver. This he effected, with my assistance, in a few minutes; the child was dead. There was a respite from convulsive seizures of half an hour; then they came on with greater violence; the breathing became stertorous and apoplectic, the heart's action began to fail, and at ten o'clock it was apparent that the case was hopeless. The treatment was as follows: general bleeding, to one pint, by Dr. Huse; a calomel purge, followed by copious enemata; cold to head, and sinapisms to feet and calves; hypodermics of morphia and ether; chloral, in hourly ten-grain doses, from four P.M. to eight P.M., and also by enemata, hypodermics of chloroform* and atropia (by myself).

No ether or chloroform was administered by inhalation in this case.

I need not say that it will always be a regret to me that anæsthesia had not been early induced, and that the entire treatment—excellent in every other respect—had not been made subordinate to a rigorous anæsthetic treatment.

The following nine cases occurred in the practice of my friend, Dr. George W. Snow, of this city, who has kindly reported them for this paper.

CASE I.—Sept. 6, 1867. Delivered Mrs. McD.—primipara—of female child. Labor commenced at about ten o'clock P.M., on the 5th inst. Convulsions came on at midnight. Had ten before I arrived. Controlled the spasms with ether. Had several spasms on the third and fourth days during the milk fever. Made a good recovery.

CASE II.—Oct. 29, 1867. Delivered Mrs. B.—primipara—of female child. Labor set in, with convulsions, at midnight. Patient had had three convulsions when I arrived. Put her immediately under the influence of ether, which controlled the spasms completely. Patient made a good recovery. Had three convulsions after the child was born.

CASE III.—May 21, 1867. Delivered Mrs. M.—primipara—of male child. Labor easy and natural. Convulsions came on twenty hours after the birth of the child. Put her under the influence of ether; moved the bowels by enema, and in the afternoon applied four leeches to the temples. Made a good recovery.

CASE IV.—May 25, 1871. Delivered Mrs. ——, primipara—of male child. Had three convulsions before my arrival. Put her immediately under the influence of ether, and delivered with the forceps. Mother and child made a good recovery.

CASE V.—Nov. 10, 1872. Delivered Mrs. B.—primipara—of female child, seven months advanced. Labor ushered in by convulsions, which were controlled by ether. Delivered by version. Made a good recovery.

CASE VI.—Jan. 19, 1873. Delivered Mrs. F.—primipara—of female child. Had a long, tedious labor, and while applying forceps to deliver patient she had a convulsion. Administered ether, and delivered immediately. Had second convulsion after the child was born. Made a good recovery.

CASE VII.—Aug. 20, 1873. Delivered Mrs. M.—primipara—of female child—premature. Convulsions came on about twelve hours after the birth of the child. Had the second convulsion after I arrived. Immediately applied the ether, which put a stop to the convulsions, and the patient made a good recovery.

CASE VIII.—March 10, 1874. Delivered Mrs. J.—primipara—of female child, still born. Labor came on at nine o'clock P.M., of the 9th inst., and she had her first convulsion at three o'clock A.M., of the 10th inst. Put her under the influence of ether, which controlled the spasms, and delivered by version, first dilating the os uteri with Barnes' dilators. Patient made a good recovery.

CASE IX.—March 4, 1878. Delivered Mrs. K.—primipara—of male child. Convulsions came on about twelve hours after the birth of the child. Had one spasm after I arrived. Immediately applied the ether, which controlled the convulsions completely. Mother and child made a good recovery.

From the foregoing cases it will be seen that in every instance where the anæsthetic was freely used, the patient made a good recovery. In the two fatal cases (Nos. 1 and 6 of my own), no ether or chloroform was administered.

The use of anæsthetics in puerperal convulsions now rests on a solid basis of clinical facts, and a practitioner who neglects this mode of treatment, when chloroform or ether is to be had, comes little short of criminality.

In the puerperal state we have inordinate irritability of the entire reflex cerebro-spinal system; we have an active poison in the blood keeping up that irritability; we cannot speedily depurate the blood of that poison, but we can protect the central nervous system from its influence, and we can reduce to a minimum that reflex excitability. "The evidence in favor of chloroform in puerperal convulsions,"

* It deserves mention in this connection that neither my friend, Dr. Huse, nor myself had with us sufficient of any anæsthetic to enable us to institute anæsthesia by inhalation. Hypodermics of chloroform (one-half drachm) have proved, in my experience, most efficient anodynes, as speedily effectual, though not quite so lasting as morphia. The pain at point of insertion is inconspicuous.

says Barnes,* "has been greatly accumulating since Simpson's time. It should be carried to the surgical degree, that is, to the extent of rendering the spinal cord irresponsive to irritation of the sphincters. The convulsive fit is rendered less violent; it is shortened. When anæsthesia is induced in anticipation of a fit, this may be almost entirely averted, and is sure to be moderated. Chloroform blots out memory, one source of emotion; it cuts off perception, another source of emotion; it lessens reflex irritability. . . . . An essential condition for obtaining from chloroform the full benefit it is capable of giving, is to keep close watch over the patient, so as to be ready to administer it on the slightest warning of a fit."

"I have never," says Phillips, obstetric physician to Guy's Hospital, "witnessed any untoward symptoms from chloroform in these cases, though I have administered it continuously for several hours, and sometimes when the patient was already in a deep comatose condition between the attacks." †

Prof. Braun, of Vienna, records sixteen cases treated by chloroform; all recovered. Chailly Honoré (1859) relates that eighteen out of nineteen cases which he treated by chloroform got well.

With regard to the comparative safety of ether and chloroform in eclampsia, there seems to be a remarkable tolerance of chloroform when administered for puerperal convulsions (the physical suffering conferring immunity, possibly like the opium tolerance of peritonitis), and as there is not a case on record of death from chloroform when used on such occasions, it may be regarded as just as safe as ether.‡

As to the use of chloral. Theoretically this agent would seem to be indicated, and in the absence of ether and chloroform, it might be beneficial, administered in pretty large doses by mouth or by enema. In No. 6 of first series of foregoing reports, it was given in sufficient doses, and failed to arrest or moderate the paroxysms. I should never resort to it, if anæsthesia by ether or chloroform were available.

Purging may sometimes be indicated, when causes of excentric irritation exist in the bowels, though it is much to be doubted whether the *premium irritamen* is ever there.

As for bleeding, I think that, with ether and chloroform at command, we can afford to consign this once vaunted remedial agent to the limbo of exploded follies.

VERATRUM VIRIDE IN EPILEPTIC CONVULSIONS.

By EDWARD F. MORDOUGH, M.D.,

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Being called upon to witness and treat many attacks of epileptic convulsions, and having thoroughly tried with but little, if any, success the numerous remedies and devices offered by our standard authorities, partly at the suggestion of Dr. L. P. Gray, of Brooklyn, I determined to give veratrum viride a fair trial. Having witnessed as well as read of the beneficial effects of this drug both in uræmic and puerperal convulsions, as well as in the "internal" convulsions of children, I hoped that I had at last obtained an agent which, used in a proper manner, would diminish the severity and decrease the frequency of the *recurring* convulsions—an end much to be desired, and one which the following cases will, I think, convince the most skeptical reader, was arrived at. Messrs. Heydenrich Bros. prepared for me the following solution, which used hypodermically was entirely satisfactory, and was followed by no unpleasant results, the small amount of morphia counteracting, in almost every instance, the nauseous and emetic effect of the drug.

℞. Morphiæ sulph.....gr. ijss.
Tr. veratri viride, -
Aq. dest., *ãã*..... ʒ ss.
Misce.

Case I.—M D., æt. 22, Oct. 17, 1877. Previous to this date it had been my misfortune to attend this man on four different occasions. He had been subject to these attacks for fifteen years, and for five or six years past the convulsions had been increasing in severity and duration, lasting, with intermissions of from five or ten minutes, for three or four hours. I had ineffectually tried to diminish their intensity and frequency by means of nitrate of amyl, chloroform and ether, the cold douche, compression of the common carotids, etc., etc., but had found it necessary in each case to remove him to the City Hospital (March, Sept. 10th, 14th, and 27th, 1877), where his convulsions continued in spite of all treatment, until after lasting a number of hours and exhausting the corps of nurses and attendants, they gradually grew less frequent and severe, and ended in the usual sleep. On this occasion he was seen about twenty minutes after the commencement of the attack, and according to the testimony of the bystanders, the convulsions had been increasing in severity and duration. While rigid and convulsed I gave him hypodermically twenty minims of the solution, representing ten minims of the U. S. P. tincture and about a tenth of a grain of morphia, and repeated the dose in twelve minutes. In about four minutes there was a marked change in the force and rapidity of the pulse, while the pupils about the same time began to dilate. The patient was kept prone, and complained of no nausea, but said the punctures were quite painful. There was no indication of a convulsion, and after watching him an hour and ten minutes, his pulse having become stronger, he was left to sleep. Learned later that no convulsion ensued, and that no abscesses were developed.

Feb. 15, 1878.—Was again called to attend M., and found him in a series of convulsions, which had not been affected by the administration of amyl in the hands of a physician, who was present when the convulsions began. Gave him twenty minims of the solution during a convulsion, and followed it with ten more minims eleven minutes later, and had the satisfaction of seeing no indication of a convulsion returning. In two hours he was allowed to walk home, and aside from slight pain due to the punctures and some little nausea on standing erect, he was none the worse for the treatment.

March 28th.—Was summoned to see M., and found him violently convulsed, the attack being the most severe ever seen by those present, well acquainted with him. He had been on a prolonged debauch, lasting three days, during which time he had eaten little or nothing, and had wound up in a police-station cell in a pitiable condition. As the convulsions were increasing in severity, at the earnest request of his friends to afford him assistance, if possible, notwithstanding his already depressed condition, I gave him eighteen

* Braithwaite, Part 68, p. 222. English practitioners prefer chloroform, which certainly acts more speedily in these severe cases than ether, unless we except Squibb's ether, which Dr. Snow tells me acted in his cases with great promptness, and entire relaxation of the parts.

† Guy's Hosp. Rep., 1870-1871, p. 343.

‡ See this subject discussed in Proceedings of Obstetrical Society of oston, Bost. Med. and Surg. Journal, Aug. 12, 1875, p. 189.

minims of the solution in the period of rest following a convulsion. In five minutes his pulse had become very much decreased in force, and had fallen from one hundred and eight to fifty-six beats a minute, and for the first time in my use emesis followed in a few moments. His pupils were dilated and skin cool and moist, and for a moment I regretted having given him a depressant in his present condition. However, as the emesis was controlled by morphia, and as his pulse became more full after the administration of a diffusable stimulant, I had no further occasion for regret. After carefully watching him for an hour, I left him in the hands of the police, and was informed later that there was no return of the convulsions, and that after sleeping for three hours he walked home, the only unpleasant result following the administration of the veratrum being some slight uneasiness at the point of puncture. I believe that the emesis present in this instance will hardly be wondered at when his condition is taken into consideration.

April 20th.—Was called to see M., and, as usual, found him surrounded by an alarmed crowd, and was told that convulsion was following convulsion at regular intervals with undiminished severity. Gave him an injection of twenty minims of the solution, following it with twelve more in nine minutes, and had the satisfaction of seeing no nausea or emesis result, and the convulsions cease. The patient was soon able to walk home, and experienced no unpleasant effects from the treatment. His being sent for six months to the county penitentiary caused me to lose sight of him.

Case II.—J. E., æt. 30. Was called to attend E., and found him in a characteristic convulsion, having a history of attacks from his youth up to the present time. He had had four convulsions, and as there were no symptoms of their ceasing, I gave him sixteen minims of the solution, following it with ten more in ten minutes. No more convulsions, no nausea, and but little local pain was the result. Moved him home, and was informed later that no convulsions or abscesses followed.

Case III.—W. M., æt. 20. Convulsions have been experienced at intervals of about three weeks for seven years. Usually last about an hour and a half. Called to see him about twenty minutes after attack began. Administered twenty-two minims of the solution, and there being no symptom of a return of the convulsions did not give any more. Patient was taken to St. Peter's Hospital, and discharged the following morning. No convulsion while in the hospital. Eight days later was again called to attend M., and found him violently convulsed, the attack having lasted but ten minutes. Gave him twenty minims. Result was as before—no more convulsions, although they had been increasing in severity up to the time of the injection, according to the testimony of spectators. The patient enlisting in the U. S. Navy prevented further observation.

Case IV.—K. C., æt. 45. Confirmed epileptic for twenty years. Convulsions had been present for twenty minutes. No diminution in severity or duration had been noticed by friends. Twenty minims of the solution, followed in eight minutes by twelve more, were administered. No convulsion or nausea followed. Was unable to learn whether or not an abscess resulted.

Case V.—J. B., æt. 38. History of epileptic convulsions for sixteen years. Patient was in third consecutive convulsion when first seen. Gave thirty minims *by mouth* as soon as paroxysm ceased. Was obliged to administer it in this manner, as my syringe was not in working order. In six minutes a convulsion occurred, as severe as any previous, but of shorter duration. None followed, and the dose was not repeated. Have every reason to believe that if the veratrum had been administered subcutaneously so that it could have been more quickly absorbed, the result would have been as satisfactory as in the previous cases. No nausea was experienced, as far as could be ascertained.

Case VI.—J. C., æt. 27. History of epilepsy for twelve years was given by friends. Convulsions usually last about an hour and a half. Were of twenty minutes duration when first seen by me. Gave him twenty minims by the hypodermic syringe, and in twelve minutes followed it with fourteen minims, as there was some indication of a return of the convulsions. No paroxysm followed, and no nausea was complained of while under my observation, nor could I learn of any subsequently from the police in whose custody he was.

Case VII.—J. C., æt. 25. On seeing this case, learned that the convulsions had been present for about fifteen minutes, and that no diminution in their severity or duration could be noticed. Gave him eighteen minims of the solution, and as there was no indication of a return did not increase the amount. The patient was able to walk home in about two hours, and was free from nausea and local pain.

My term of service as ambulance surgeon having expired, I was compelled to discontinue my observations, which had more than justified my most sanguine expectations. To recapitulate, the veratrum was administered subcutaneously in nine cases, and although the convulsions had been increasing in severity, or at least were not becoming less severe, no convulsion followed its administration. In the one case in which the drug was given by mouth but one convulsion followed, and that was shorter in duration than the previous ones. Emesis was established in but one instance, and was promptly controlled by morphia. As far as could be ascertained, the injections were not followed by abscesses, and but little local pain was experienced. In conclusion, I believe that the inference to be drawn from the above cases is that, administered subcutaneously, veratrum viride in large doses of from ten to fifteen minims of the U. S. P. tincture, will in almost every instance abort the *recurring* convulsions of epilepsy, and that used in such doses no unpleasant result will be experienced.

Treatment of Tænia.—In the administration of the bark of the root of punica granatum for tænia, M. Laboulbène departs from the usual practice, by giving castor-oil after instead of before the anthelmintic. He macerates from two to three ounces of the fresh bark in two glasses of water, for 24 hours, and then boils it down to half the quantity. This is given in two portions, at an interval of half an hour; the oil is given as soon as the patient begins to complain of malaise, intestinal pain, and borborygmus. When administered at this time the oil hastens the expulsion of the worm, which might otherwise refasten itself to the wall of the intestine. Another formula recommended by M. Laboulbène, is the following: Filix mas, ʒ j.; syrup of ether, ʒ xijss.—M. This is to be taken in one dose, and should be followed in two hours by an ounce of castor-oil. The syrup of ether narcotizes the worm, which is then unable to resist the action of the purgative. The vermifuge should only be given at a time when the patient is passing fragments of the tænia.—*Jour. de Méd. et de Chir.*

Progress of Medical Science.

On Changes in the Medulla of the Long Bones under certain Pathological Conditions.—In the hope of throwing some light on the pathology of the marrow of the bones, Drs. Litten and Orth examined the bones of 100 persons of different ages, varying between 11 and 81 years, and found to their surprise that in the great majority of the cases the femur contained red marrow to a greater or less extent. Almost without exception this was located in the upper end of the diaphysis, extending in a compact mass to a varying distance in the cylinder; in some cases small round or jagged red nodules were seated in the midst of fatty medulla. In these 100 cases, red marrow was found in 72; hyperæmic fatty marrow, which contained a moderate number of medullary cells, and was in spots of an intense red color, in 17; and pure or atrophic fatty marrow, containing, however, hyperæmic streaks and islets, in 11 only. In most of these cases death had resulted from disease, but in some of them it had been due to injury. The red marrow was found in the latter as well as in the former, but the general conclusion drawn from the cases, was that the deviation from the normal state of the medulla of the bones is principally to be found in connection with chronic diseases, more particularly those which lead to cachexia and marasmus, such, for instance, as phthisis and cancer. The deviation was, however, also met with in some cases in which death had resulted rapidly from acute disease. An interesting point is, that all the acute affections in which red marrow was found were affections that are always, or at least generally, attended by swelling and hyperplasia of the spleen. The results of these investigations confirm also Ponfick's statement, that a varying degree of atrophy of the marrow, with transformation into a gelatinous substance, is frequently found in connection with chronic and especially cachectic diseases.

With regard to the anatomical elements of the medulla, Drs. Litten and Orth regard the nucleated red blood-corpuscles as a very constant element, as they failed to find them in only 8 of the 100 cases. All of these eight individuals were over 50 years of age, all of them had died of diseases common to old age, which do not lead to marasmus, and in all of them, with one exception, the medulla was purely fatty. On the other hand these corpuscles were found in a man of 81 years who had died of cancer of the bladder. They were often found, although in small numbers, in apparently purely fatty marrow, and they were sometimes found, also, in the blood. Cells, which were much less deeply colored, and were, perhaps, a younger stage of the transitional form, were very frequently met with. The ordinary red blood-corpuscles were present in large numbers, and there was also a considerable number of very large, deeply colored cells about 0.01 mm. in average diameter, and without nuclei. These are what Hayem called giant blood-corpuscles; they have frequently been found during life in the blood of anæmic individuals.

The ordinary medullary cells with granular protoplasm were found in almost all the cases; smaller forms with hyaline cell-body were also met with, but less frequently. Cells containing blood-corpuscles were seen in 31 of the 100 cases; some of these cells contained also nucleated red blood-corpuscles. Pigmented cells were even more common; in one instance the pigment was so abundant that the case had to be regarded as one of melanosis of the marrow. The subject had suffered from chronic intermittent, and the spleen and liver were full of the same pigment. The Charcot-Neumann crystals were found in most but not all of the cases.

The conclusions drawn from these cases by the investigators are, first, that the progressive displacement of the red by yellow marrow as age advances must be admitted, but that the change is by no means regular, and that it can be stopped, and even a retrogressive change caused, by various pathological processes. Second, that, in general, diseases which lead to marasmus are most constantly attended by the development of red medulla in the long bones, and by an increase of the nucleated red blood-corpuscles. Third, that the changes in the marrow in pernicious anæmia are not peculiar to that disease, but are found—even combined with similar changes in the blood—in other diseases attended by intense anæmia.

Drs. Litten and Orth are disposed, from these investigations, to agree with Neumann in the opinion that the changes in the bones are secondary to, and caused by, the anæmia, and that they indicate an effort of nature to counteract the anæmia by increased production of blood. To determine this point they have instituted a series of experiments on dogs, which were made anæmic by repeated and copious venesections. These experiments are not yet completed, but they state that in four of the dogs red marrow was found in long bones that normally contain fatty marrow, and that enormous numbers of nucleated red blood-corpuscles were found in the newly formed red marrow as well as in that of the short bones; some of these cells were also found in the blood. In a fifth dog, that was killed after five venesections, the number of medullary cells and of nucleated red blood-corpuscles was unusually large, while that of the ordinary non-nucleated red corpuscles was uncommonly small.—*Berliner klin. Wochenschrift*, Dec. 17, 1877.

Six Cases of Congenital Blindness Cured by Operation.—Dr. Louis Fialla, of Bucharest, Roumania, reports six cases of congenital cataract that were treated by the operation of discission or solution. In four of the cases the lesion was bilateral lenticulo-capsular cataract, and in two, bilateral lenticular cataract. Two of the patients possessed a slight degree of sight, but the other four could distinguish only light and darkness. In five of the cases both eyes were operated on, a single operation sufficing for each eye. In the sixth case a small portion of the central part of the left lens was transparent, permitting a certain degree of sight, and the patient would not submit to an operation on that eye. The results in all of the cases were highly satisfactory, a very good degree of sight being obtained, even without glasses. Although four of the patients were over fifteen years of age, one of them being twenty-five, the reaction after the operation was moderate in all but one of the cases.

Treatment of Chronic Adenitis by Cauterization with Nitrate of Silver.—This treatment, which is recommended by M. Casson, consists in opening the tumor at its centre with a narrow bistoury, and cauterizing the interior with the solid stick of nitrate of silver. The treatment is employed as soon as fluctuation is apparent, no matter how obscure it may be. This cauterization should be the rule whenever a chronic glandular abscess is opened, whether its walls be thick or thin. It is especially advisable in cervical adenitis.—*Gazette des Hôpitaux*, No. 75.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE EPIDEMIC—ITS LESSONS AND ITS DUTIES.

It is a rude shock for those of us who have come to believe in the impossibility of frightful epidemics in civilized countries to realize that one is in full play about us, slowly but firmly extending its way and accomplishing its work of devastation, with but little hindrance, spite of the most heroic and indefatigable efforts.

We may, therefore, at this time reasonably ask ourselves whether or not we are eventually to gain the mastery over the enemy, or whether, as other epidemics have shown, cessation comes either from lack of victims or from the fall of the temperature, which comes at its regularly appointed time. Under date of September 9th, we see no abatement in the scourge, and we are therefore coming to believe that an alteration for the better is not to be expected at present. It is well to recognize the possibility—indeed, the probability—that the full height of the epidemic is not yet at hand, and we shall then be the better prepared to direct our efforts wisely and with the most effect. Perhaps it is also well to know that in many localities the fatality of the disease has reached the average of the old European visitations (one to three of those attacked), and even in some places the average of tropical epidemics (one to about two). Still we hear that under favoring circumstances, where there has been great care and caution, the deaths have been much less (one in twelve), which shows how much may be done by intelligent treatment, and should be an encouragement when we hear that the cases baffle medical skill.

Removed as we are from the immediate scene of desolation, most of us are prevented from taking an active part in the direct relief of the sufferers, and indeed for unacclimated persons, it would be worse than useless to attempt it; but as we have the whole scene laid before us from day to day, we may furnish much material aid to those who are working so unflinchingly, and may learn lessons which will be of incalculable benefit in the future. A few facts will illustrate what we may have to expect. In the fall of 1762, in Philadelphia, the epidemic lasted until November, the climax being reached on September 25th. In 1793 it did not reach its height until the first week in October. In 1802, when Philadelphia was again visited, it commenced on the 15th day of July, and did not decline until after October 28th, the greatest mortality being between the 15th and 25th of that month. This being true of a northern town, it is probable the visitation may last fully as long in the southern cities, and therefore the calls which are now being made upon our relief committees to organize for prolonged and systematic work are well-timed.

The question of external and internal quarantine was alluded to in a recent issue, and we held the ground that, in the matter of importation of the disease from outside ports, we should have no fear, as our quarantine authorities have shown themselves able to successfully cope with it. Still as we have no internal quarantine properly so called, healthy localities are peculiarly exposed to the danger of contracting the disease through refugees coming from infected districts. When Health Boards exist, as in St. Louis, measures are taken by the local authorities, and the advent of infection is guarded against. Many of our towns and villages, however, are without sanitary authorities, and are consequently without proper advice as to the precautions necessary to prevent an epidemic, and are ignorant of the means of checking it should it appear. But local Boards are of little use without State Boards to adopt general measures for the State, settle conflicts between districts, and, as in this instance, establish camps for refugees from infected towns. Those of our States who still lag behind in the appointment of these Boards, should take warning by the present sad condition of affairs, and remember that many valuable lives might have been saved if the State authorities had established efficient quarantine in the infected districts, at the outbreak of the disease. Out of the State Boards would, in a short time, rise a National Health Bureau, to regulate the commerce between States at such times as the present, whether by water, rail, or any other mode of communication, to announce the approach of disease, and at other times to draw up health laws for the whole country, regulate the question of pollution of rivers, etc.; matters which are assuming great importance, in so far as many cities obtain their drinking-water from rivers that are more or less polluted by receiving the discharges from sewers and factories. In the present emergency we may not expect aid from the government in the establishment of internal quarantine. Through the office of the Surgeon-General of the Marine Hospital Service we receive weekly bulletins of

the progress of diseases when they are likely to be of importance to us. This is in accordance with Section 4 of the National Quarantine Act, approved April 29, 1878, which provides: "That the Surgeon-General of the Marine Hospital Service shall, upon the receipt of information of the departure of any vessel, goods, or passengers from infected places to any port in the United States, immediately notify the proper State or municipal and United States officer or officers at the threatened port of destination of the vessel, and shall prepare and transmit to the medical officers of the Marine Hospital Service, to collectors of customs, and to the State and Municipal health authorities in the United States, weekly abstracts of the consular sanitary reports and other pertinent information received by him."

These weekly abstracts are designed to be "a practical aid to State and Municipal Health Boards, as well as to the port health authorities."

Here, then, we may see the foundation of a National Health Bureau, and of its usefulness we may judge by the accurate information it has been giving us for the past few weeks.

There seems also to be room for further investigation as to the nature of the yellow fever poison, and the method of its propagation, while the question of the value of disinfectants is again in the balances; so, too, whether damp or insalubrious soil has to do with the violence of the disease. If the reports are true, our ideas upon some of these points rest upon a very unstable foundation, and the laborious researches which have engaged so many of our eminent men require extension, and in the light of the modern means of investigation at our command, we should, doubtless, gain a more accurate knowledge of the malady. It is therefore pertinent to second the appeal made by the citizens of Memphis to have a government commission appointed to review the entire subject, and make a scientific inquiry into the "cause, nature, treatment, and future prevention of the fearful epidemic now raging." The matter is one of national importance, for not only has the loss of life been immense, but we have a paralysis of commerce in a large portion of the South, and a severe strain is being put upon the whole country by the efforts of relief which are necessary.

There is a point of practical interest, which, perhaps, is the very first at the present time. It is the subject of sanitary cleanliness in exposed districts. A recent correspondent of the *Times*, in a letter from New Orleans, makes the astonishing statement that "the cleaner the streets, and the more fashionable the quarter, the greater, apparently, is the violence," while "the filthiest streets are either wholly free from taint, or have only widely-scattered cases of a mild type."

This, of course, combats our generally received ideas.

The history of carefully studied epidemics, as those of Philadelphia by La Roche, has seemed to show that the disease usually originated in certain unhealthy localities, where it was most malignant and fatal. He observes especially that *Water street* played an important part in almost every yellow fever epidemic. According to his description in 1855, it was confined, low, and ill-ventilated, under the bank of the river, inhabited by the poorer and lower classes, and never clean. Two-thirds of the houses had not a single foot of yard-room, and the privies were in the cellar. Then there was a stream which also was intimately connected with yellow fever epidemics. It was called Pegg's Run, and was allowed to receive the offal of slaughter-houses, the drainage of tan-yards, the contents of two culverts and of a number of privies.

There is another point also of interest to us now. When the disease has been epidemic one year, it has been quite apt to return the next, or even continue to return for a series of years. This has been noticeable in the history of yellow fever since its introduction to the country in 1699.

There is another peculiarity about the fever: that it has been apt to assume different types at different times, and, consequently, physicians who have seen the disease for the first time have not been prompt in recognizing it. According to a very intelligent description which we have of it from New Orleans, there is often an absence of the initiatory chill; there is little headache and no pain in the back or loins until the fever has set in.

Then, malarial fever is a complication; this may run on for several days, and then turn into yellow fever; or an attack of yellow fever may run into a remittent fever. The days of greatest danger are the third, fifth, seventh, and ninth, the third being the most fatal, and each of the others less so progressively.

The yellowness of the skin does not appear in more than one case in five. Black vomit is the most fatal symptom, and somewhat more than half the cases die when it sets in. Next in order as a frequent cause of death is congestion of the kidneys, and next, congestion of the brain—which kills in ten per cent. of the cases. According to a record of 200 malignant types, the temperature in fatal cases is about 101° F. on the first day, reaches 105° F. in the early part of the second day, but falls, on the same day, to the neighborhood of 103° F., again rises, on the third and last day, to about 105° F., at which it remains until death supervenes. In non-fatal cases it commences at about 100° F., reaches 105° F. on the second day, but soon commences to fall, and is normal at the end of the third day. The most simple treatment seems to be the best. Useful information on this point is contained in the letter of Dr. Fowler in our last issue.

Undoubtedly the most important part of our duty just now is to remember the condition of the southern

physicians, who have been toiling unremittingly at the post of danger and duty, and whose vigilance and skill may be required for many long weeks to come. They are all devoted to a charitable work, which, for the most part, will neither sustain them nor their families, and they must therefore rely upon the support that can only be furnished them by relief committees. Many, too, have died, and left their families totally unprovided for. It is peculiarly suitable that their professional brethren throughout the country should combine for their relief, and organize a system which shall carry them through the fearful task which is imposed upon them. The Medical Society of the County of New York has led off in forming a committee of its officers, to receive subscriptions for this purpose, and it would be well if all county societies throughout the country would follow its example.

THE ROLL OF HONOR.

In another column we publish a list of physicians who have died while in attendance upon the yellow fever patients in the different cities of the South. As it stands, it is a simple record of dates and names which are extracted from the telegraphic dispatches furnished to the Associated Press; but to the medical practitioner there is an interest in the occurrences which is hidden from the ordinary eye, and which proves an intensity of devotion to professional duty scarcely appreciated by the public at large. The people expect personal sacrifices because they are the rule with the profession, forgetting, perhaps, that the life of the doctor is as precious to himself and family as if he were another person. The real fact, however, is that during a pestilence, and always knowing the danger, the physician never hesitates to hazard life in the performance of professional work, and, falling with those around him, he elevates his action to that sublimity of heroism which can only belong to a willing martyrdom for helpless suffering. When the cry for help went out over the land, the merchants and bankers pitied the sufferers, and, with a generosity worthy of the cause, emptied their coffers into the common charity; the Howards came to the rescue, and, with their valiant band of helpers, distributed their good offices everywhere; and, lastly, the humble doctor offered his services to stem the tide of devastation and death. Death is in the line of his duty, and the greater the force of the pestilence, the more stubborn must be the fight. But the struggle is so unostentatious that one hardly knows it is going on. He takes his stand at the lone cot of the pauper, under cover of the night, in the silent chamber of the dying, with his life in one hand and help in the other, with pestilence stalking everywhere—and yet there is something within him which, for want of a nobler name, is called duty, which always nerves him to fight persistently, silently, and patiently to the end.

How many noble examples of this have we witnessed during the present epidemic, and how proud as a profession should we be of our brothers who—without hope of fame, without thought of reward, and with the single idea of succoring the needy—have lain down their lives upon the common altar of our humanity! Let us cherish their memories, emulate their example, and take fresh courage for the daily life-battle before us. Let us hope that the ranks of such heroes will always be full, and each in the humble, stern way of his duty, whether in Maine or Mississippi, in Illinois or Louisiana, whether amid the horrors of pestilence or in ordinary and numerous sacrifices of professional life, be ever ready to perpetuate the glorious record of those who have gone before. We are glad to learn that the Medical Society of the County of New York are taking the necessary steps for the preparation of suitable memorials for our departed friends, and we have no doubt that all the necessary data will be furnished in due time. For one and all the common epitaph can be conscientiously and consistently written, "Well done, thou good and faithful servant."

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 26, 1878.

Dr. E. C. Seguin, Vice-President, in the Chair.

REPORT OF MICROSCOPICAL COMMITTEE.

Dr. Wesley M. Carpenter read the following report of the Microscopical Committee:

The Microscopical Committee, to whom was referred the spleen presented to the Society by Dr. Beverley Robinson at its stated meeting, held June 12, 1878, submitted the following report:

On making sections of the organ, the cut surface was found thickly studded with small, round bodies, which had a whitish color and were easily detached with a needle, springing out as it were from the surrounding tissue.

These bodies when teased in glycerine and water, were found to consist of a basement-substance composed mostly of reticulated connective tissue, in which were imbedded small round and oval cells, together with irregular-shaped and indistinctly nucleated masses, which probably were the so-called giant-cells. On making these sections and staining them with hæmatoxylin, the little bodies presented appearances commonly seen in tubercle; that is, the central portion of some of them was changed into a granular and somewhat structureless mass which did not readily take the staining fluid; of others there was an abundant stroma, while along the borders were well-developed round and oval cells, and in places could be seen the irregular-shaped masses which have been referred to as probable giant-cells. The spleen, therefore, contained miliary granulations which presented the gross and microscopic appearances of tubercle. Dr. Satterthwaite has examined the specimens and concurs in the above report.

LIGATION OF LINGUAL ARTERY NEAR ITS ORIGIN—EXTIRPATION OF CANCEROUS DISEASE OF THE TONGUE.

Dr. Geo. F. Shrady presented an epitheliomatous tumor of the tongue, which he had removed the day previous by operation, having previously ligated the lingual artery near its origin. (See page 204.)

Dr. Post remarked that Dr. Shrady's case afforded a very striking illustration of the absence of anastomosis between the two sides of the tongue, the ligation of the lingual artery of one side being sufficient to control the hemorrhage from the half of the tongue removed. He stated that in the museum of the University there was a tongue which was enormously injected in one-half, while the remaining half was free; none of the vessels of the latter contained any injection, except along the line of the mucous membrane.

Dr. Sands said that the removal of cancer of the tongue was a very difficult operation, and one which was very unpromising in its results. There was probably no cancer more malignant than that of cancer of the tongue; no form of epithelioma which was more prone to kill quickly after removal. The question had presented itself to him whether the latter circumstance was not owing to the difficulties in extirpating the disease. He had often felt uncertain upon the latter point. The exposure of the morbid tissues was very difficult, even with the best means at our command; the size of the mouth was comparatively small, the light was usually bad, while the cavity was apt to be filled with more or less blood, which increased the difficulty of the undertaking. He stated that he had no experience in ligation of the lingual artery as a preliminary procedure. He had seen the artery tied but once in the place of election. In that case the difficulties of that operation were very great. The patient was an inmate of St. Luke's Hospital, and the operation was performed for a vascular tumor of the tongue. It struck him as a very formidable operation, and very much more difficult than he had been led to anticipate from dissections of the dead body. Very good surgeons had attempted to tie the artery and failed. Billroth was one such. He tied, as he supposed, the lingual as a preliminary operation, but was astonished to find, on making a section of the tongue, that the main artery bled very copiously, compelling the prompt application of the ligature. The patient died soon after, and at the post-mortem examination it was found that the lingual vein had been mistaken for the lingual artery. Considering the difficulty in securing the lingual, he preferred, when the disease was situated in the floor of the mouth and was extensive, to divide the jaw in the median line, and in that manner expose the diseased parts. This gave a very thorough exposure of the tongue and floor of the mouth, at the same time allowed easy access, without undue hemorrhage, to the diseased parts. The objection to the operation was that the result was very often complicated with non-union of the divided bone. He thought another indication in the operation was to cut wide of the diseased tissues. About four months before, a gentleman, on the eve of departing for Europe, came to his office with cancer of the tongue. Dr. S. sent him to a distinguished Parisian surgeon. The latter as well as two other surgeons agreed in the diagnosis and proceeded to remove the disease with the écraseur and the Paquelin cautery. It was stintingly done, and the wound never healed. A month afterwards the patient presented himself with an ulcer along the line of section.

It may have been possible that in that short time the disease had reproduced, but it was more probable that some of the disease had been left by the operation.

Dr. Briddon stated that he was present during an operation by Dr. Sands for the removal of the tongue by galvano-cautery, and when the latter was indicated he could not conceive of anything that could answer a better purpose. In regard to the difficulties of ligating the lingual artery, a great deal might be said. He had seen an attempt made to secure the artery, and had witnessed its failure by a distinguished surgeon of this city; he had also seen the artery tied successfully. The operation, as performed by Dr. Shrady, and based upon an accurate knowledge of the anatomy of the parts, was divested of a great many of its difficulties. No surgeon who was not a thorough anatomist should undertake the operation. He could not conceive how it was possible to mistake the lingual vein for the artery. In Dr. Shrady's case the latter vessel was seen to pulsate distinctly as it was lifted upon the aneurism needle. The ligature was applied where it always should be applied, and although in that situation it is said to be attended with more than ordinary difficulty, it was done with comparative ease, the whole procedure occupying less than twenty minutes. He believed that, when properly done, the operation was divested of danger. When the ligature was applied, as was the rule, within the digastric triangle, there was very apt to be hemorrhage from the root of the tongue supplied by the dorsal branch.

Dr. Shrady remarked that in deciding upon the performance of the operation, he had several circumstances to take into account. In the first place, he promised the patient that he would not mutilate her face or divide her jaw, unless such was absolutely necessary. This ruled out the operations of Collis and Syme. In the second place, he believed that he could reach the disease more satisfactorily with the knife and scissors than with the écraseur, especially as only half of the tongue was to be removed. In the third place, the patient's mouth was shallow, and the diseased parts could be brought within easy reach.

The only serious objection to such a measure was the hemorrhage which might ensue, which objection was obviated by cutting off the entire blood-supply of that side of the tongue by a ligature of the lingual near its origin. He thought when the lingual was tied the operation of removal of the tongue through the mouth was the one to be preferred, as there was then no danger of hemorrhage, and the dissection could be carried on with ease and deliberation. Of course, when the disease involved the floor of the mouth to such an extent as to make it impossible to remove it otherwise than by a division of the jaw, the latter procedure was imperative. In his case he believed that all the diseased portions were removed without such an operation. And this was a better result than he had at first anticipated.

Dr. Carpenter remarked that the history of the case illustrated in a striking manner the value of an early operation. He had seen the case, in consultation with Dr. Lyons, in the latter part of March. At that time there was a simple ulceration surrounding the tooth, one inch in length by three-quarters of an inch in breadth. He thought that at the time it might have been easily removed by a simple excision. From a clinical point of view, the case, up to the time when Dr. Shrady saw it, was interesting. In the first place, there was an association of local irritation with the production of cancer. Secondly, as to treatment, there were some matters to be taken into account. The patient, not being willing at first to have an

operation performed, was placed upon medical treatment. Arsenic was administered for a number of days, perhaps two weeks, and with marked benefit; the pain was very much less, and the angry look of the ulceration subsided. The disease then increased, when local applications of the arsenic were made—likewise with temporary benefit. Subsequently citric acid was applied, also with very good effect for a while. Subsequently to this, no medical treatment was of any avail; her pain was intense, and her condition became deplorable. Yet, in the beginning the disease could have been removed by a very simple operation.

Dr. Ripley had tried the arsenic treatment several times, but had never seen any special good from it. He referred to a case which was said to have been benefited by large doses of iodide of potassium. The patient was treated in St. Luke's Hospital, but, shortly after this favorable report was made, rapidly died from cancer.

Dr. Briddon never experienced the slightest benefit from arsenic in such cases. Dr. B. asked whether in cancer of the tongue any benefit that might be derived from operation justified the use of any excessive mutilation—such, for instance, as section of the lower jaw.

Dr. Sands believed he could answer that question in the affirmative. Cancer of the tongue was a dreadfully painful disease, and justified severe treatment in any case. When there was a chance of removing all of the disease by splitting the lower jaw, that operation should be done. When there was no such opportunity, he favored the division of the gustatory nerve. He had performed such an operation in three cases with marked benefit, the excessive pain being thereby very markedly and satisfactorily controlled in two, while in a third it was entirely removed until the death of the patient three months afterwards.

Dr. Post remarked that in cases where it was expedient to extirpate the floor of the mouth for cancerous disease, the division of the jaw greatly facilitated the operation. It was, indeed, not a formidable complication for the soft parts, and there was not likely to be non-union of the bone when the divided ends were well wired together. He thought that the procedure added to the safety of the operation, as thereby the danger of hemorrhage was diminished. When it was necessary to make deep dissections in the mouth and far back through the tongue, there was great difficulty in securing bleeding vessels, and the jaws could not be separated widely enough to admit of the necessary light. He mentioned in this connection the case of an old woman from Long Island, upon whom he had performed that operation. He did not consider that she suffered thereby, or that her subsequent death was hastened by it.

Dr. Mason remarked that he had seen it stated somewhere, that when the tongue was removed by galvano-cautery there was more likelihood of secondary hemorrhage. He mentioned a case in point, that of a female patient at the Roosevelt Hospital. One portion of the side of the tongue was removed by galvano-cautery, and she went home the following day. Within twenty-four hours afterwards there was violent secondary hemorrhage, requiring a ligation of the vessel in the wound. Hemorrhage recurred in twenty-four hours, and the physician being apprehensive of the case, Dr. Mason ligated the lingual artery in the triangle.

Dr. Shrady thought that the splitting of the jaw complicated the recovery of the patient, and should be avoided, if possible. He did not believe it was necessary in his case, as the sequel showed. As far as the control of the hemorrhage was concerned, that was effected by the ligation of the lingual, which for such an object was to be preferred to division of the jaw. The division of the gustatory was not indicated in his case, as all the disease could be removed along with the portion of nerve affected.

REMOVAL OF CONGENITAL CYSTIC TUMOR OF THE THYROID GLAND.

Dr. Sands presented a specimen that was of interest, on account of the rarity and severity of the operation for its removal. The patient was a girl of six years, in excellent health except for the disease which necessitated the operation. It was related by her mother that she was born with a large tumor of the neck, and also that the tumor had gradually increased, interfering by its size with the relations of the surrounding parts. It gave her no trouble, however, except by its deformity, until two and a half years ago, when it became inflamed and painful. It was lanced, and pus in considerable quantity was discharged. Shortly after being lanced it broke spontaneously, and discharged by two openings up to the time of her admission to the Roosevelt Hospital. The tumor then projected from the median line of the front of the neck, more to the left than the right, and was of a rectangular shape.

It was limited above by the hyoid bone, or seemingly by the chin, when the head was flexed. Below it extended nearly to the sternum. Behind, on the left, it reached to the posterior border of the sterno-cleido-mastoid muscle. On the right it extended to the anterior border of the same muscle. Everywhere the limits of the tumor seemed well defined. Above it did not involve the submaxillary triangle, in which situation, on the left side, the carotid artery might be felt pulsating, evidently below the base line of the tumor. Just below that point the tumor pulsated, probably from resting on the artery below. This coincided with the radial pulse. The base of the tumor appeared loose in its attachments and anterior to the important structures in the median line of the throat. The skin was adherent to the tumor beneath at these points only. There were no large veins in the skin over or about the tumor. There was a slight enlargement of the glands in the left axilla. The consistency of the growth was firm and nodular, and at one or two places yielded a tense cystic feel. The tumor moved some on swallowing, which was done without difficulty. The voice was a little husky. Measurement of tumor: complete measurement from side to side, 9⅝ inches; complete measurement from above below, 6⅝ inches; lateral measurement from behind forward, 4⅝ inches; anterior surface of tumor in median line, 4x3½ inches; circumference of neck at middle, 14⅝ inches; circumference of neck after operation, 9½ inches.

Treatment.—Patient brought in good condition for operation. Dec. 5th, the patient being under ether, the operation for removal of the tumor was performed by Dr. Sands, assisted by Drs. Markoe and Mason. The tumor being well drawn over towards the left, an incision four inches long was made well over to the extreme left and posterior border of the tumor. The incision was vertical, extending from the lower border of the mastoid process above to nearly the lower extremity of the tumor below. The skin and fascia being cut through, the surface of the tumor, covered by a dense capsule, came into view. The external jugular vein was not exposed. The posterior flap was then dissected back from the tumor, showing

numerous enlarged veins coursing over the surface of the growth; several of these were secured by passing threaded aneurism-needles about them. The dissection was then continued by means of the finger, scalpel-handle, and scissors—curved on the flat backward towards the base of the tumor, which was drawn forward by blunt hooks. The internal jugular vein was soon exposed, with the carotid artery, felt pulsating beneath it. The tissues were now mostly torn or divided on a director, several ligatures being required on small spurting points. The lower end of a divided branch of the internal jugular vein, close to the main trunk, was guarded by digital pressure, and the dissection was soon brought to the left side of the larynx and trachea. Further advance in that direction was then temporarily arrested. A second incision from the middle of the first was then carried across the whole breadth of the tumor to the right side of the neck, thus completing a T-shaped cut. These flaps were rapidly dissected back, with scalpel and scissors curved on the flat, soon exposing the whole of the front of the tumor. The mass was then drawn over to the left side by hooks, and the dissection carefully carried towards the root of the tumor, about the larynx and upper part of the trachea. One or two ligatures to small vessels were all that were found necessary. The child beginning to show symptoms of shock for the first time, the dissection was soon brought to a termination, the last attachment at the root being that to the thyroid cartilage, to which it appeared quite closely united. Everywhere else its limits appeared well defined by its capsule. Time for removal, forty-two minutes. The pulse and respiration, at this time, were still fair in quality, but very soon severe symptoms of syncope came on. Pulse and respiration almost imperceptible. Elevation of lower extremities of the body; application of Esmarch's bandage to the limbs. Injection of whiskey subcutaneously and by the rectum, with inhalation of *pure oxygen gas*, resuscitated the patient, the last-named agents proving themselves markedly beneficial. The incision was then brought together by sutures, except at the most dependent parts on the left side, where a drainage-tube was inserted, held in place by a string about the neck. A dressing of carbonized oil spread on sheet-lint and covered by jute was put on. Although no large vessels were divided, there was considerable oozing and consequent loss of blood during the operation.

At the close of the operation diligent search was made for the thyroid body, but none was found.

The progress of the case gives nothing of special interest to relate. The patient made a good recovery, the temperature never rising above 101⅘° F. The following was a report of the examination of the tumor by Dr. Delafield:

The tumor was seen after it had been soaked in dilute alcohol for 24 hours. At that time it measured 4½x3 inches, and weighed 317 grammes. It was composed of a number of large cysts, some containing a thin fluid, some gelatinous matter, some atheromatous matter.

Between the cysts were many large and small nodules of hyaline cartilage, in parts infiltrated with the salts of lime. Between the cysts was also some soft tissue. This was composed partly of compact connective tissue, partly of tissue arranged so as to form a loose mesh-work.

In the spaces thus formed were rounded and polygonal nucleated cells; there was also some infiltration of similar cells in the adjacent compact tissue.

In a few places were large tubules lined with cylindrical epithelium, and rounded follicles filled with gelatinous matter and looking like follicles of the thyroid body.

Dr. Sands remarked that congenital cysts of the neck were extremely interesting in connection with questions regarding treatment by surgical operation. It was well known that in many instances the growth was quite rapid from the start, while in others no progress was made until adult life. Their deep-seated situation, and the frequency with which they involved important vessels and nerves in their neighborhood, invested any procedure for their removal with interest. The operation was undertaken in the case in question for the removal of a dreadful deformity in an otherwise beautiful child, and for the arrest of a discharge which was becoming very offensive and profuse. The operation itself did not promise to be a very difficult one, inasmuch as the finger could be passed behind the growth and there were no evidences of deep-seated adhesions. The sequel proved, however, this conjecture to be erroneous.

The tumor was interesting in regard to its probable nature, or rather to the texture in which it took its origin. The question was, whether the tumor simply originated in the thyroid gland, or was a congenital tumor of that gland. So far as he had been able to ascertain, there was very little known concerning congenital tumors of the thyroid body. Von Ammon spoke of congenital tumors that attained considerable size, but the satisfactory evidences of their true nature were wanting. Mr. Holmes, fifteen years ago, said that when such tumors were found they should not be detached. Dr. Sands did not think that the real difficulties of the operation were increased whether the tumor was in the thyroid body or not. So far as the operation was concerned, even if the growth had such an origin, the vascularity of the thyroid body would be wanting in the tumor. Whether the tumor did have its origin in the thyroid body could not be told. The tumor rose and fell during deglutition, was firmly attached to the thyroid cartilage, and after the dissection no traces of the thyroid were discoverable. On the whole, in the absence of proof to the contrary, he was inclined to look upon it as a congenital cystic tumor of that gland.

WOUND OF AXILLARY VEIN.

Dr. Post wished to state that the patient from whom he had removed a large tumor of the breast, involving the axillary vein, and whose history he had presented at the previous session, died a few days after the operation.

CHELOID TUMORS OF THE EAR.

He then presented some cheloid tumors removed from the lobes of each ear, the result of wearing earrings. In order to cover the parts from which the growths were removed, a supplementary plastic operation was performed. The patient being under ether, the tumor in the left lobe was cut out, preserving a small portion of the integument from the interior, as well as from the posterior part, being able to form a lobe by these two pieces being brought together by sutures. On the right side the tumor was removed, preserving a small part of integument on the interior portion, but was obliged to cut all the posterior part of the integument up to the helix. To supply the deficiency a triangular flap of integument, with its base uppermost, was dissected from the inframastoid region of the neck, and doubled upon itself so as to be attached by sutures to the internal and external margins of the flap of integument which had been preserved in front. The sides of the triangular wound from

which the flap had been taken were brought together by one pin suture and a number of fine silken ones. Two head sutures were employed to bring together the new-formed lobe.

FIBRO-PLASTIC TUMOR OF CALF OF LEG.

DR. POST lastly exhibited a fibro-plastic tumor of the gastrocnemius muscle, which he removed by operation from a lad 18 years of age. Although the entire substance of the muscle was removed at the situation of the growth, the wound healed by first intention throughout its entire extent, except at the situation of the drainage-tube.

A CASE OF ROUND GASTRIC ULCER WITH REFERENCE TO ITS ETIOLOGY.

DR. R. W. AMIDON presented a specimen of ulceration of stomach, illustrating the origin of the disease. The history was as follows:

March 27, 1878, a male, æt. 37, fell fifteen feet, breaking four ribs. Eighty-two days later he died of a combination of pneumonia and pyo-pneumothorax, having manifested during his sickness no symptoms of gastric disturbance. On post-mortem examination, in addition to the pulmonary lesions, which we will pass over, was found marked atheromatous stiffening of the aortic valves, with moderate atheromatous degeneration of the aorta. On the lesser curvature of the stomach was found a healed round ulcer. The ulcer was one and a half inches long by seven-eighths inch wide, and at one margin quite deep—its base, evidently, when new, reaching or penetrating the muscular coat.

On the base of the ulcer, which was covered by smooth cicatricial tissue, were two depressions giving the ulcer more or less of a funnel shape.

In the subserous areolar tissue, at some distance from the ulcer, were seen two arteries with their venæ comites leading directly to the ulcer. When followed by a delicate director and scissors their lumen is found to be abruptly occluded directly under the ulcer.

For many years German (Virchow first), and later other authorities, have maintained that true or round gastric ulcer had for its sole cause circumscribed interruptions of blood-supply *i. e.*, either thrombosis or embolism. To the former cause can be traced ulcers occurring in anæmic, chlorotic, and marasmic subjects, where no lesion but the ulcer can be found on post-mortem. To the latter cause can be traced ulcers occurring in subjects having endarterial or endocardial disease. In the present case the existence of endocardial disease points conclusively to embolism as the cause of the ulcer. It is well known that only the free surface of the gastric mucous membrane affords an acid reaction, the deeper tissues being alkaline. It is this alkalinity which prevents self-digestion of the mucous coat by the gastric juice. This alkalinity is kept up only by the constant renewal of the alkaline fluids by the blood. Experiment has shown* that cutting off the blood-supply, as in ligation of the cœliac axis, self-digestion takes place; while introduction of foreign bodies (emboli) causes ulcers (Panum). The circumscribed patch, cut off by embolism from arterial supply, loses its alkaline reaction, and is digested by the gastric juice.

THE MICROSCOPIC ANATOMY OF NECROTIC BONES.

DR. C. HEITZMANN presented microscopic specimens of necrotic bone. The structure of both healthy and necrotic bone had been studied in his laboratory by Dr. C. F. W. Bödecker, who succeeded in finding out striking differences between the two, which up to this time were entirely unknown. The observations were summed up in the following results: In the healthy bone, the so-called lacunæ contain protoplasmic bodies, with a distinctly visible net-like arrangement, to be regarded as the living matter of the protoplasm. The basis substance is pierced by numerous coarse and fine canaliculi, communicating with each other, as well as with the lacunæ. The protoplasmic bodies, which do not quite fill the lacunæ, send offshoots of the living substance into the canaliculi, but can only be seen in the coarser ones. In the necrotic bone, traces of former osteitis are visible, but no blood-vessels present in the Haversian canals, which are filled with organisms of decomposition, namely, micrococci. In necrotic bone, most of the lacunæ contain no protoplasma, but either a coarsely granular or a structureless mass—remnants of the living matter and coagulated albumen. C. F. W. Bödecker's paper has been recently published in the *Philadelphia Dental Cosmos.*

The Society then went into Executive Session.

* COHN, Klin. d. embol. Gefässkrkh., p. 515.

Correspondence.

HOMŒOPATHY AND EXCLUSIVENESS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—The letter of "Medical Ethics," in your issue of the 7th inst., is somewhat peculiar, and suggests to the attentive reader the idea that its writer is but partially acquainted with the facts, or else is not writing in good faith.

His first error is the statement that "the morbidly conscientious querist might with equal plausibility, under its soothing influence, consult with eclectics." A reference to the Report of the Comitia (MED. REC.) will show that the eclectics are exclusives insomuch as they exclude, by public declaration, certain drugs and methods of treatment.

"Medical Ethics" asks: "Does not a regular graduate forfeit his professional standing by practising empiricism, exclusivism so-called, and by joining associations which uphold similar doctrines?" An answer to this query turns upon the meaning of the terms "empiricism" and "exclusivism." The word empiricism is used in two widely differing significations. In the first place it means a practice founded upon experience only, without the aid of a general theory. Under this definition the practice of the majority of the profession is certainly empirical, and if that of "Medical Ethics" is not, it may not be impertinent to ask what is his guide in treatment. Conversely, the practice of homœopaths is not empiricism, for they claim to possess a general guide capable of indicating the appropriate treatment in cases where experience is silent.

For the second signification of the term empiricism we turn to the Code of Ethics. The only reference that we find to the subject is in Sec. 3, Art. I., Chapter II. Referring to advertising, cards, hand-bills, proving radical cures, publishing cases and operations in the public prints, etc., the Code says: "These are the ordinary practices of empirics, and are highly reprehensible in a regular physician." Under this definition we certainly would answer this portion of "Medical Ethics'" query in the affirmative, and agree that the "regular graduate" should "forfeit his pro-

fessional standing" if he follows such practices. Does "Medical Ethics," however, pretend that the homœopaths are guilty of these breaches of professional honor to any greater extent than the members of our own organizations? If so, let him advance the proofs. Homœopaths, then, are not specially devoted to "empiricism" in either meaning of the term, and if "Medical Ethics" uses the term in a different signification from the ones we have given, it certainly devolves upon him to furnish his own private definition of it if he wishes his writings to be clearly understood.

As regards "exclusivism," we also agree with "Medical Ethics" that a regular graduate should forfeit his professional standing for practising exclusivism. We may, however, differ from him in the signification of the term, and until we are acquainted with his own definition of it, we are hardly in a position to discuss its applicability to the present issues. Taking the Code as its guide, the Comitia Minora have given its opinion that the so-called liberal homœopaths are not exclusives. If "Medical Ethics" differs from the Comitia, it certainly is incumbent upon him to point out distinctly what it is that these homœopaths exclude. For our own part, we do not see in what their exclusiveness consists, and, until further enlightened, are disposed to accept the opinion of the Comitia.

Turning from these points, we come to another, which "Medical Ethics" apparently deems of special importance, as he has placed it in italics. In quoting, we give it the same prominence. He proposes, as an amendment to the Code, that

"*Any member of a county medical society who shall consult with or meet professionally any physician who is not a member of the society of the county in which he resides, or of a kindred society of another county, shall forfeit his membership. This liability shall also apply to professional intercourse with physicians of other States who are not members of a society recognized either by the American Medical Association or the Medical Society of the State of New York.*"

As most of the homœopathic and eclectic practitioners of this State belong to county societies, this amendment would permit us to consult with them, but forbids consultation with similar practitioners in other States. We fail to see a good reason for this distinction, and fail to understand why "Medical Ethics," after inveighing against exclusivism in general, should be willing to open the doors to consultations with eclectics and to all homœopaths, some of whom are as exclusive as Hahnemann himself, if not more so.

"Medical Ethics" further says, "while drawing the lines tighter," etc. This at first thought seemed a little at variance with the proposed amendment, but upon examining the matter more carefully, we find that the amendment, if adopted, would exclude from professional recognition at least one-third of the physicians of this county, whose names are in the Medical Register, including even the President of the Academy of Medicine. Can it be that "Medical Ethics" honestly proposes such a measure? or has he been a little careless in the statement of his views?

The great curse of the medical profession at the present day is sectarianism, and any movement that tends to its overthrow should meet the encouragement of good men, and every attempt to restrict the liberty of thought and freedom of practice by educated men should and will be defeated in the end. Our own sentiments are well expressed in the formula so often quoted: "*In certis unitas, in dubiis libertas et in omnibus charitas.*" Respectfully yours,

SENEX.

Obituary.

WASHINGTON LIGHT ATLEE, M.D.,

OF PHILADELPHIA.

WASHINGTON LIGHT ATLEE, M.D., died at his residence, Philadelphia, on Saturday evening, September 7th, of cancer of the stomach, a disease from which he had long suffered.

He was born at Lancaster, Pa., on February 22, 1808, and was consequently in his 71st year. He was the youngest son of William Pitt Atlee, and grandson of Hon. William Augustus Atlee, one of the early Judges of the Supreme Court of Pennsylvania, his term extending from 1777 to 1793. His maternal grandfather was Major Washington Light, a soldier in the army of the revolution.

At the age of fourteen, young Atlee was placed in a dry goods store. At the expiration of eighteen months, not being satisfied with the commercial life, he commenced the study of medicine in the office of his brother, Dr. John L. Atlee, of Lancaster. In 1829 he graduated at the Jefferson Medical College, in this city, and commenced the practice of his profession in the town of Mount Joy, where he frequently lectured on scientific subjects, and became known throughout the State as an active and earnest temperance advocate and orator. In 1834 he returned to Lancaster, and for ten years closely applied himself to his profession.

In 1845 Dr. Atlee was elected to the chair of Medical Chemistry in the Medical Department of the Pennsylvania University, and in the same year removed to Philadelphia and entered upon the discharge of his new duties. He filled the chair until 1853, when his private practice was so great that he was compelled to resign. He was an active member of the State and County Medical Societies and the American Medical Association. A brilliant extempore speaker and an able debater, his weight was always cast in favor of a higher medical education and a broad and liberal construction of the rights and duties of medical life. As a practitioner, he was famous for his advocacy of the operation of ovariotomy. Commencing its performance and defending its propriety at a time when hardly another surgeon in the land dared support him, he vindicated its merits by his success in more than three hundred cases. Dr. John L. Atlee, the brother of Washington, and with whom he prosecuted his earlier studies in surgery, performed the operation in 1843 with entire success. Being associated with his brother in the case, Dr. W. L. Atlee at once began studying the literature of the operation, and spent much time in collecting and collating all that had any bearing on the subject. He performed his first operation in 1844, in Lancaster County, on a married lady, aged sixty-eight. It proved fatal. In the same year he performed it successfully on a younger patient in Lancaster City.

It was during this year that he came to Philadelphia to reside permanently. He found ovariotomy everywhere decried. It was denounced by the medical profession, in medical societies, in all the medical colleges, and discouraged by his own colleagues. He was pointed at as a dangerous man, even a murderer, and a celebrated professor, in a published lecture, invoked the law to arrest him in the performance of the operation. His first patient in Philadelphia was visited by an eminent surgeon twenty-four hours before the operation was performed, and warned that

if she permitted it she would be a dead woman in twenty-four hours. She declined to believe, was operated on, and recovered. Dr. Atlee lived to see the practice he sought to establish generally recognized, by many of those indeed from whom he encountered the greatest opposition. As a writer he contributed ably to all the current medical and surgical magazines. The prize essays of the American Medical Association in 1853 included one written by him, and quite recently (1872) he summed up his extended experience in a volume on ovariotomy. His loss to his profession, which he adorned, and to society, where he was esteemed and admired, is a severe one.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 1 to September 7, 1878.

KING, WM. S., Lieut.-Colonel and Surgeon. Assigned to duty at Carlisle Barracks, Pa. S. O. 156, Dept. of the East, August 31, 1878. Granted leave of absence for six months on account of sickness, with permission to apply for an extension, if necessary. S. O. 190, A. G. O., September 2, 1878.

SIMONS, J., Lieut.-Colonel and Surgeon. Assigned to duty at Fort McHenry, Md. S. O. 156, C. S., Dept. of the East.

HEAD, J. F., Lieut.-Colonel and Surgeon. Assigned to duty at Fort Independence, Mass. S. O. 156, C. S., Dept. of the East.

MCPARLIN, T. A., Major and Surgeon. Assigned to duty at Fort Hamilton, New York Harbor. S. O. 153, C. S., Dept. of the East.

MCCLELLAN, E., Major and Surgeon. When relieved by Asst. Surgeon Gray to proceed to Fort Lapwai, Idaho, and report for duty at that post. S. O. 104, Dept. of the Columbia, August 22, 1878.

BARTHOLF, J. H., Captain and Asst. Surgeon. Relieved from duty at Camp Harney and assigned to duty at Fort Stevens, Oregon. S. O. 104, C. S., Dept of the Columbia.

GRAY, W. W., First Lieut. and Asst. Surgeon. Assigned to temporary duty at Fort Vancouver, W. T. S. O. 104, C. S., Dept. of the Columbia.

CAMPBELL, A. B., Captain and Asst. Surgeon. Died at Chicago, Ill., on Sept. 1, 1878.

TREATMENT OF PUERPERAL FEVER.—In cases of puerperal fever, Dr. Jas. Glover gives the following mixture every three or four hours:

℞. Quiniæ sulph	grs. ij.
Tr. ferri chlor	℥x.
Spti. chloroformi	℥x.
Syrupi simp	ʒss.
Aquæ destil	ʒi.
M.	

He also gives a pill containing half a grain of opium, every three, four, six, or eight hours, and applies a large poultice sprinkled with laudanum over the abdomen. This is renewed every three or four hours. He orders the vagina to be syringed out, at least twice a day, with warm water, containing a little Condy's fluid. He rejects ipecac on account of its nauseating properties, and calomel on account of the intestinal irritation it produces. For diet he gives beef-tea or chicken soup, brandy and arrow-root.—*The Lancet.*

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.—Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 7, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Aug. 31, 1878.	3	34	51	4	7	22	0	0
Sept. 7, 1878.	1	19	27	8	2	37	0	0

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE, WASHINGTON, D. C., Sept. 7, 1878.

NATIONAL QUARANTINE REPORT.—Abstract of sanitary reports received during the past week under the National Quarantine Act:

New Orleans.—During the week ending yesterday noon there were 1,732 cases of yellow fever and 526 deaths, making in all, 4,609 cases and 1,395 deaths. During the twenty-four hours to noon yesterday there were 280 new cases and 61 deaths.

Port Eads, La.—During the past week there was 1 death from yellow fever, but no new cases.

Morgan City, La.—During the week to yesterday noon there were 14 cases of yellow fever and 2 deaths, making in all 22 cases and 6 deaths.

Vicksburg.—During the week ending yesterday evening there were 181 deaths, 41 of which occurred in the last twenty-four hours, making in all 366 deaths. About 2,500 cases have occurred since the outbreak. Surgeon Keyes telegraphs that "the fever is on the increase, and it is impossible to obtain accurate data."

Grenada.—Dr. Warren Stone reports 96 new cases of yellow fever and 49 deaths during the week ending yesterday evening.

Canton, Miss.—During the fortnight ending yesterday noon there were 172 cases of yellow fever and 22 deaths, making in all 190 cases and 30 deaths. There are 120 cases under treatment, of which 16 occurred during the last twenty-four hours.

Ocean Springs, Miss.—During the week ending yesterday evening there were 15 cases of yellow fever and 5 deaths.

Holly Springs.—The first case of probable yellow fever occurred on the 27th of August, resulting in death Sept. 1st. 2 deaths from undoubted yellow fever followed on the 2d. To yesterday evening about 100 cases and 25 deaths had occurred. More than one-half the populatian fled the city between the 2d and 5th inst. All of the members of the Board of Health are sick.

Memphis.—For the week ending Thursday evening, Sept. 5th, there were 529 deaths from yellow fever. Dr. Thornton reports that the number of cases cannot be obtained. During the week before, the number of deaths (241) and the number of cases (721) were as 1 to 3.

Hickman, Ky.—The first case of yellow fever occurred August 16th. There were 60 cases and 24 deaths to yesterday evening.

Louisville.—For the week ending yesterday evening there were 25 new cases of yellow fever and 7 deaths, all refugees and river boatmen.

St. Louis.—During the week ending yesterday evening there were 3 deaths from yellow fever—2 refu-

gees and a resident nurse who attended the refugees in hospital. At quarantine, below St. Louis, there were 10 new cases admitted, and 9 deaths, all refugees but one, the steward of the quarantine hospital, who is now sick, he having contracted the disease at quarantine. All boats and trains from infected districts are prohibited from entering the city, which remains healthy.

Pascagoula, Miss.—3 cases of yellow fever in shipping from New Orleans between the 1st and 5th inst.

Cincinnati.—From Aug. 28th to afternoon of Sept. 4th, 3 new cases of yellow fever and 2 deaths occurred among refugees.

Bay St. Louis, Miss.—One refugee arrived from New Orleans, Aug. 26th, with yellow fever, and was sent back to New Orleans the next day. No other cases.

Mobile.—City healthy. No yellow fever since the 1 death which occurred Aug. 31st.

Key West.—2 cases of yellow fever and 1 death during the week ending yesterday noon.

Havana.—74 deaths from yellow fever and 7 from small-pox during the week ending Aug. 31st.

Matanzas, Cuba.—During the fortnight ending Aug. 30th, there were no cases of yellow fever in the bay, and only a few cases on shore.

Sagua la Grande, Cuba.—Since the 16th of August there were 2 deaths from yellow fever, but at the date of advices, Aug. 28th, there were no cases in town or harbor.

Calcutta.—9 deaths from cholera and 26 from small-pox, week ending July 6th.

Bombay.—41 deaths from cholera and 6 from small-pox. week ending July 16th.

Madras.—6 deaths from cholera, week ending June 28th.

No official reports could be obtained from *Port Gibson, Miss.*, *Greenville, Miss.*, and *Brownsville, Tenn.*, where yellow fever is reported to exist.

Reports from other places indicate good health, including *Blount Spring, Ala.*, and *Cedar Keyes, Fla.*, both erroneously reported, through the press, as having cases of yellow fever.

JOHN M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

HELP FOR SOUTHERN PHYSICIANS.—At a special meeting of the Medical Society of the County of New York, held at the College of Physicians and Surgeons, on Tuesday evening, Sept. 3d, it was voted that the officers of the Society be constituted a Committee of Ways and Means, for the purpose of raising a fund of money to be used for the relief of physicians and their families, who have suffered, or may suffer from the epidemic of yellow fever, now prevailing in Southern and Western cities. The Committee so constituted, calls, therefore, upon all physicians residing in this county, to forward to any of its members such sums as they may be pleased to contribute to this object. Donations of $1.00 to $5.00 will be acceptable (although much larger ones have been, and will be received), and the amounts will be acknowledged through the bulletin of the Society.

Committee.—John C. Peters, M.D., 83 Madison Avenue (*President*); Isaac E. Taylor, M.D., 7 East Thirty-sixth Street (*Vice-President*); A. E. M. Purdy, M.D., 288 Madison Avenue (*Recording Secretary*); F. A. Castle, M.D., 102 East Fifty-seventh Street (*Corresponding Secretary*); Horace P. Farnham, 36 West Fortieth Street (*Treasurer*).

The Medical Society of the County of Kings (N. Y.) has also taken the matter in hand, and subscriptions can be sent to its President, Dr. Alexander Hutchins, 796 DeKalb Avenue, Brooklyn, N. Y.

THE ROLL OF HONOR.—At the suggestion of the President of the Medical Society of the County of New York, Dr. A. B. Judson, of the Committee of Neurology of said Society, has prepared the following list to date of September 8th, of Medical men who have died of yellow fever while ministering to the victims of the pestilence in the different stricken localities:

Grenada, Miss.—Aug. 19th, Dr. Milton and Dr. Hawkins. Sept. 1st, Dr. W. W. Hall, Dr. Hughes. Sept. 5th, Dr. Gillespie. Sept. 7th, Dr. E. J. Hughes. Sept. 13th, Dr. May.

Memphis, Tenn.—Aug. 21st, Dr. F. Sarner. Aug. 25th, Dr. John C. Rogers. Aug. 28th, Dr. Hopson. Aug. 30th, Dr. K. T. Watson. Sept. 4th, Dr. W. R. Hodges. Sept. 7th, Dr. T. M. Dickinson. Sept. 8th, Dr. R. B. Williams, and Dr. Mead, a volunteer from Kentucky.

Vicksburg, Miss.—Aug. 28th, Dr. Booth. Sept. 6th, Dr. P. F. Whitehead.

New Orleans, La.—Sept. 2d, Dr. J. G. Byrne.

Canton, Miss.—Aug. 23d, Nathan McGee. Sept. 1st, Dr. M. J. McKee.

THE PATHOLOGY OF YELLOW FEVER.—The President of the Medical Society of the County of New York and the President of the New York Pathological Society have named a joint committee of five members of each society, which may be increased, to report at an early date upon the pathology of yellow fever. The committee will consist of Dr. Thomas E. Satterthwaite, Dr. Francis Delafield, Dr. J. W. S. Arnold, Dr. E. G. Janeway, Dr. Lewis A. Stimson, Dr. George F. Shrady, and others, to whom all communications on the subject from other members of the societies will be referred. The Committee on Hygiene of the Medical Society of the County of New York will probably be asked to co-operate with members of the Public Health Association, and of the Medico-Legal Society, who are also members of the County Society, in their special sphere. The New York Therapeutical Society may also be asked to co-operate with the County Society in regard to the best modern treatment of yellow fever. The Committee on Necrology of the County Society have been requested to prepare a list of South-western physicians who have died at their posts. The Finance Committee of the County Society have been called upon to audit the accounts of the Committee on Ways and Means.

EFFECT OF FARADIZATION IN A CASE OF HYDROPHOBIA.—This case, which was reported to the *Académie des Sciences* by Dr. Bonley, was that of a young veterinary surgeon, who cut himself while performing an autopsy on a mad dog. The symptoms of hydrophobia appeared three weeks afterwards. Hypodermic injections and chloroform inhalations aggravated the spasms. Faradization was then resorted to, one electrode being placed on the nape of the neck and the other on the planta pedis. An immediate improvement ensued, and the patient regained the power to speak and to swallow fluids. As the continued use of the treatment was very painful, it was interrupted, but the spasms returned at once with all their former violence, and did not relax until the faradization was resumed. Finally, after two days of alternate exacerbations and remissions, the patient died suddenly of paralysis of the heart. Notwithstanding the unfavorable terminnation of the case, the sedative action of the current was sufficiently marked to warrant further trials.—*Deutsche Med. Wochen.*, No. 19.

Original Lectures.

CLINICAL LECTURE ON SOME PRACTICAL POINTS RELATING TO CATARRHAL PHTHISIS.

DELIVERED AT BELLEVUE HOSPITAL MEDICAL COLLEGE.

BY BEVERLEY ROBINSON, M.D.,

LECTURER UPON CLINICAL MEDICINE.

GENTLEMEN:—There are few subjects connected with medicine that it is more essential thoroughly to understand than catarrhal phthisis, and for this reason I am extremely glad to be able this afternoon to bring to your notice two typical cases of somewhat different forms of this disease, together with pathological specimens which fully illustrate what I shall have to say about its morbid anatomy. Before narrating my two cases permit me first to make some general remarks. In reference to the question of tubercle, its nature, origin, and growth, I have fully informed you in my preceding lecture on Acute Miliary Tuberculosis. To-day I have taken a topic of study which is perhaps less confused by the writings of authors, and can be more easily grasped by the mind of a beginner in medicine. Although the *precise* nature of pulmonary phthisis is still a matter of debate with medical practitioners, every one concedes that an inflammatory process enters largely into its essential march, and is a most important factor in the destruction of tissue which usually results from its presence. In considering tubercle, I have shown you how many theories stood juxtaposed, or antagonistic. In the interpretation of the anatomical facts pertaining to catarrhal phthisis of simple type there is less room for doubts and speculation. With respect to this variety of phthisis, it can safely and positively be affirmed there is nothing at all *specific* in its nature. It is undoubtedly an inflammatory change from the very start. And this inflammation, without regard to its amount or its stage, is catarrhal in character. The intensity of the inflammation, and the period at which it is arrived will, to a great degree, explain the differences of appearances met with in the lungs. Of course we must not neglect a due consideration of the constitution, natural or acquired, of the individual affected. And we have already seen in a previous lecture that a scrofulous constitution is without question a most powerful predisposing cause to cheesy infiltrations in lung-tissue, as elsewhere. Catarrhal phthisis is seated from its commencement in the cavities of the pulmonary alveoli. It affects principally the epithelial lining of the lung-cells, and is but a propagation of a similar catarrhal condition which began originally in the mucous membrane of the large bronchial tubes. This catarrh of the alveoli soon becomes chronic, has no tendency to resolve itself, and is only too prone to take on a cheesy condition (cheesy pneumonia). Frequently, the first evidence we have of the presence of a catarrhal condition of the lungs is in the upper lobes, and from there it gradually extends, and little by little implicates the whole pulmonary structure. One of its marked features is its chronicity; it does not appear to get entirely well, or if it does for a short time, it very rapidly recurs, and from a slight exciting cause. The inflammatory products are cellular in nature and are always very abundant—hence the almost constant desire to expectorate; at times it becomes difficult for the patient to spit, and it is only after a severe paroxysm of cough that he is able to throw off from his lungs a tenacious pellet of thick mucus. When the inflammatory process has extended to the small bronchial tubes, these latter are apt to become clogged with hardened mucus which the efforts of the patient cannot remove. The result is that the inspired air cannot pass beyond these obstructions, and therefore cannot penetrate the air-cells. As we should expect, the air-cells of a certain number of lobules quickly collapse; there is a free desquamation of their epithelial lining, and their walls soon become notably thickened by a local hyperplasia of connective tissue. We shall not have long to wait, then, until a fatty metamorphosis of epithelial cells in the before collapsed lobules takes place, and afterwards cheesy nodules are seen. These cheesy nodules may be more or less large—more or less numerous. Usually, after each attack of acute bronchial catarrh some of them are formed. Recovery even after they are formed, is still possible, but you can readily appreciate that the chances of an ultimate favorable result decrease immensely as the process is permitted to implicate a more extensive area of lung-tissue. This it will of course do if bronchial attacks repeat themselves. Of course these nodules may soften, and when reduced to a semi-fluid state appear in the sputa of the patient: but once the softening process begun, lung-cavities are more likely to form and a rapid process of ulceration be engendered. Calcification and encapsulation, it is true, are not impossible, as many post-mortems show, but this is not to be relied upon.

If ulceration is set up, it is not long before the alveolar wall gives way and there is a communication with a bronchial tube. According to some authorities it would appear as if the celerity with which cheesy nodules become broken up and fluid was in very close relationship with their size and the rapidity with which they are produced. This is perhaps more a view of the mind than an actual fact. At all events, my personal experience does not enable me to be dogmatic in this regard. Unless the breaking-down process of the cheesy nodules be very rapid, we are tolerably sure to find an augmentation in the alveolar and interstitial connective tissue which separates the lobules one from another. This fibrous development, as you are aware, when excessive, gives its name to a particular kind of phthisis, which, you will remark, is very distinctly evident in the lung I hold in my hands. You will notice the striated and granulated appearance which it has, and also the large amount of local pigmentary deposit, which gives it a dark grayish coloration. The lung at this level is already of tough, almost leathery consistence, and I can make but little permanent impression upon it by moderate pressure. In other words, it does not tear easily. This fibrous tissue has a decided tendency to contract, and with such formations we may expect to find a certain amount of depression in the infra-clavicular spaces during life. You must understand, therefore, that fibrous phthisis may be, and frequently is, an accompaniment of catarrhal phthisis. The more acute in its march, however, the catarrhal form is, the less there is proportionately of this fibrous condition. And it is not rare to find extensive softening of cheesy nodules which have been formed very rapidly, surrounded by alveolar walls of almost normal thickness. With these preliminary remarks in regard to the pathology of catarrhal phthisis, and of which you have a specimen before your eyes, I will now briefly relate the two cases of patients who have come here this afternoon at my request.

CASE I.—F. M., printer, married, thirty-three years of age, born and resided always in New York city; came under my care, November 5, 1877, in the Outdoor Department of the New York Hospital. This patient took a severe cold nine months ago, and ever since has been suffering from cough, loss of strength, and insufficient nutrition. For several months past his sputa have been streaked with blood, and are abundant and of yellowish color. At times he perspires profusely in the early morning, when still in bed. He sleeps poorly on account of cough, and is becoming daily more anxious as he finds himself steadily growing weaker. He has literally no appetite at present, and what food he takes is swallowed with a feeling akin to loathing. Prior to the cold contracted nine months ago he enjoyed good health, and comes of a robust, healthy stock. At times, towards evening, his voice is hoarse and weak. During the forenoon it appears to him normal in strength and timbre.

Physical examination of chest reveals the following signs: prolonged expiration, harsh in character, under the right clavicle. At the same level in front, on the left side, there are jerking, feeble inspirations, and the expiratory sounds are almost inaudible. On the right side of the chest, both in front and behind, in the supra-clavicular fossa, crackling sounds are heard during cough. There is more dulness, on percussion, at the right apex than at the left, as you perceive, and yet the tonality of sound is nowhere healthy, but indicates diminished normal resonance. Vocal resonance is about the same on both sides in the infra-clavicular spaces, and not sufficiently abnormal to strengthen much our opinion as to the condition of the lung-tissue beneath. The chest-movements are certainly much restricted in amplitude, while the abdominal elevations are excessive. I find the heart normal. When my patient is tranquil he suffers but little from dyspnœa; but let him attempt even moderate exercise, and immediately the alæ of the nose indicate the dyspnœa, to which he may become subject at any moment. This man has taken dessertspoonful doses of Churchill's syrup of the hypophosphites of lime and soda four times daily pretty constantly during more than four months, and made use of tincture of iodine as a counter-irritant externally. As you will remark farther on, he appears to have received some benefit from this medication.

Towards the latter part of November my patient was greatly annoyed with increased frequency in the appearance of blood in his sputa. To remedy this symptom I prescribed small doses of the fluid extract of ergot, and in a few days sanguineous expectoration came to an end.

During the second week of December, the night-sweats became more profuse and distressing, but fortunately I was able to control them at that time, and on several occasions since, by gtt. v.–x. of tincture of belladonna, to be taken at bed-time; so soon as this dose was increased the eyes became weak (dilatation of pupils).

On *Dec. 26th* I made a second physical examination of his chest, and found the signs of phthisis at the second stage somewhat improved, though I was still able to recognize crackling sounds in the supra-spinous fossa on the right side, at the end of a strong effort of cough.

March 6th.—The sputa are whitish.

March 25th.—Slight diarrhœa; extreme weakness; the cream and whiskey ordered a week ago has taken away completely what little appetite still remained. I therefore ordered him to stop it and to try small doses of cod-liver oil with the hypophosphites, instead of the syrup of Churchill alone. The two most distressing symptoms *now* are shortness of breath and anorexia to the point of loathing for food.

Now, gentlemen, let us review together a few points of this history and dwell upon their practical import. The diagnosis of the case should evidently be catarrhal phthisis, and the affection in the instance before us has arrived at its second stage at the right apex. It commenced, as such cases too often do, with the symptoms of an ordinary cold, and this cold, somewhat neglected, or badly treated at first, led finally to cheesy consolidation, and then to softening and breaking down of lung-tissue. The first point to which your attention is directed is the man's profession. He is a printer by trade, and has, therefore, led rather a sedentary life and lived in anything but a healthful atmosphere. His diet and lodging appear to be good, but he frequently worked all night and fatigued himself beyond his strength. Even when he had contracted a severe cold he did not lay by as he should, but continued persistently to work. Here then are sufficient causes taken together, to establish an acquired predisposition to phthisis. There is no necessity to inquire rigidly into his family antecedents in order to make this development possible; and as a matter of fact, when we do so, we find it very clear and satisfactory. The patient's father and mother both died at an age past middle life, and from causes wholly foreign to the disease we are now studying. His sisters are all full-grown women, who enjoy excellent health. Hereditary influences can scarcely, therefore, be invoked, and the man's personal history prior to his cold could not excite uneasiness apart from his injurious trade. I would recommend you in strong terms to make use of small doses of ergot in these cases, to arrest spitting of blood, and more abundant hemorrhage too, if it unfortunately takes place. The remedy is innocent, and may be given in large doses, if required, without fear. I have seen it succeed in arresting abundant hemorrhage from the respiratory tract, when other remedies had signally failed. You may then give as much as a drachm at a dose, and repeat it several times in a few hours, if the case is urgent. Meanwhile let the patient suck and swallow constantly small pieces of cracked ice.

To arrest the night-sweats, I know of nothing preferable to the tincture of belladonna given internally up to the point of toleration. If you wish to vary the form of this medication, you may try hypodermic injections of the sulphate of atropine, commencing with one one-hundredth of a grain at bed-time. This is certainly a most effectual remedy, and, as you have remarked in a previous lecture, the one relied upon by Dr. Anderson in the profuse perspirations of acute miliary tuberculosis. *A fortiori*, if atropine will arrest perspirations effectually in the latter case, we may have little doubt that it will accomplish the desired object in the former. I would also advise you to try, if belladonna and atropine fail in their effects, the dilute or aromatic sulphuric acid, in fairly large doses and given in the acid infusion of roses as an attractive menstruum. Beware, however, of disastrous action upon the enamel of the teeth, and let the patient take this last-named dose through a glass tube. The mouth should also be thoroughly rinsed after swallowing each dose. There is another remedy, whose action has been vaunted and extensively tried in arresting the night-sweats of phthisis: This is the sulphate of quinine, the actual panacea of so many ills. Now, gentlemen, while I wish you to use all innocent means at your command to arrest un-

pleasant symptoms of disease, I do not wish you to rely upon uncertain ones—and in my experience, quinine does not arrest night-sweats in phthisis; no more does it effect this result upon sweating resulting from bodily weakness due to other causes. How are you to treat the cough of phthisical patients? It is oftentimes a difficult question. Do not give opiates, however, until you are absolutely compelled. Other remedies soothe the cough quite as well in the beginning, and do not destroy the appetite and weaken the digestion to anything like the same degree. Try chlorodyne first of all. It is a proprietary remedy, I am aware, and as such deserves our reproach; but is certainly an admirable one, and will do more for the cough of phthisical patients than any other anodyne with which I am familiar. It contains morphine, but I rather suspect its essential action is due to the chloroform and prussic acid among its numerous ingredients. Give it in doses of x. to xx. drops *pro re nata*. For several months, both in the Outdoor Department of the New York Hospital, at Charity Hospital, and elsewhere, I have given dessertspoonful doses of the mistura creasoti of our pharmacopœia, to lessen the quantity of sputa in phthisis. I am very much pleased with this remedy, and believe it merits a very extensive trial. No doubt, in lessening the abundance of expectoration, it also diminishes the frequency of cough. I owe my employment of this remedy to Dr. Bouchard, of Paris, who has used creasote with good effect in the treatment of phthisis. Dr. B.'s observations were judiciously made in his hospital practice, and are recorded in one of the late foreign medical publications. I have tried to help my patient's appetite in different ways.

Everything has failed me, even the tincture of nux vomica, upon which I usually place most reliance. As a counter-irritant to the chest, I have used tincture of iodine. I believe it is a good local remedy, but I also believe part of its beneficial action is due to its effects upon the respiratory tract by inhalation. You know that iodine is volatile, and in this way becomes a modifying agent of considerable value in all chronic affections of the bronchial tubes. I first learned its use in a solid form from Prof. Piorry, of Paris, the inventor of the plessimeter, who often ordered metallic iodine to be placed in an open vial at the patient's bedside during the hours of sleep. If the vapors become too irritating and excite cough, the vial should be closed with a stopper. If not, it may be permitted to remain open throughout the night and the patient will inhale the fumes, which are unquestionably useful in many cases. In the tincture of iodine I consider the alcohol objectionable. There is a remedy which acts more severely than iodine, but which is certainly a capital counter-irritant. The one I refer to is the emplast. thapsia. It is not much employed in our country, but will, I trust, become by and by more generally known and used. When a thapsia plaster is applied, be careful *not* to put it too near the neck, and after applying it wash the hands thoroughly. Thapsia is volatile, and may cause red blotches on the neck and face, which are temporarily disfiguring, if these precautions be ignored. The plaster should be applied at night and allowed to remain from eight to twelve hours, according to the delicacy of the patient's skin; after the expiration of this time it raises a myriad of miliary vesicles upon the skin in the place where it was applied. If itching result, it may be allayed by smearing the surface with almond oil. Thapsia is not a cause of *permanent* disfigurement, as croton oil or tartar emetic are when applied locally, and it is not so painful in its action as mustard or cantharides. In concluding these somewhat elementary, but practical remarks, let me insist before you upon the great value of Churchill's hypophophites of lime, soda and potash. In my hands they have done really good work, and I can scarcely recommend their use too strongly; they are indeed in the treatment of catarrhal phthisis the most efficient remedy I know of. You will find, however, upon reference to Dr. Churchill's original pamphlet, published many years since, that he considers the *manner* in which they are prepared of primary importance, and on this account they should only be purchased at a drug store of high repute. Dr. Churchill advises them to be given in doses of ten grains in half a teacupful of milk upon rising in the morning. Whenever I have been able I have adopted this way of prescribing them. I regret, gentlemen, time will not permit me to detail my other case, which is also one of catarrhal phthisis. Unlike the first one narrated, it took its origin in an attack of acute lobar pneumonia, and now the whole upper lobe on the right side offers distinct signs of cheesy consolidation, already softening in certain points. The treatment will be almost similar in the two cases, although in the second case I shall prefer to use a succession of camphorated fly-blisters locally, rather than the tincture of iodine. The camphor sprinkled over the cantharides makes its effects innocuous, as regards the kidneys and bladder.

CLINICAL LECTURE

DELIVERED AT THE UNIVERSITY HOSPITAL,

BY HORATIO C. WOOD, JR., A.M., M.D.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS, AND CLINICAL PROFESSOR OF NERVOUS DISEASES, IN THE MEDICAL SCHOOL OF THE UNIVERSITY OF PENNSYLVANIA.

I. *Tumor of the Brain.*
II. *The Multiple Spinal Scleroses.*

[Reported for THE MEDICAL RECORD.]

TUMOR OF THE BRAIN.

S. D., 29 years of age, colored. I can elicit nothing reliable with regard to his previous history. He has been fairly intelligent until within the past year or so, when very marked evidences of mental deterioration appeared. At present his mind is much weakened, he is nearly totally blind, has persistent and excruciating headaches, and has lost his muscular power entirely. The loss of power is general. There is no local palsy. He vomits whenever he tries to move about in bed. He did not begin to suffer from pain in his head until quite recently. The pain starts in his forehead and darts round towards his ears. He also complains of pain low down in his neck. He has never, he says, received a sunstroke, and has never upon any occasion lost consciousness. Meningitis very frequently follows sunstroke, and may amount in time to a chronic cerebritis; but it is, as a general thing, entirely curable. There may have possibly been an attack of sunstroke, but all the facts of the case are opposed to the supposition. He never had any fit until after the inception of the severer symptoms. The blindness came on slowly, first appearing after a convulsion. His bowels are obstinately costive, and he has lost his sexual impulses altogether; says, in fact, that they never were very strongly developed. There is very marked choking of the discs. This symptom, in the majority of cases, proves the existence of intracranial pressure, and yet I have

upon several occasions myself seen choked discs where there was no sign of cerebral disease. Though a presumptive evidence, therefore, it cannot be considered proof absolute. It is, indeed, not invariably present in cases of cerebral tumor.

All the symptoms in this case—the persistent paroxysms of headache, the blindness, and the excessive vomiting—point towards the existence of a cerebral tumor. Persistent headache, for instance, is a proof that we have either meningitis or a cerebral tumor to deal with. As regards the diagnosis between these two conditions, the headache consequent upon the irritation of a cerebral tumor is generally more severe than in the case of meningitis. In the former disease there is sometimes a fixed local pain at the seat of the tumor. This characteristic, fixed pain is rare, however. There is usually, as here, deeply-seated pain in the forehead and neck.

With regard to the blindness: What does it mean? Tumors of the brain are often associated with blindness. Ferrier places the seat of vision in the large convolution on the top of the first cerebral convolution. Destruction of this brain-substance on one side, according to the above authority, causes loss of vision in the other eye. Ultimately, however, one side is able to replace the other and perform the functions of both. There is no doubt that the corpora quadrigemina are connected with the function of sight. They are not, however, centres of visual consciousness. The visual impression is probably received and elaborated at the points of Ferrier, mentioned above. One is guided, no doubt, in reading a book, by the reflex impression from the corpora quadrigemina; but this reflex act takes place without any mental perception of the same.

Disease of the cerebellum is quite frequently associated with loss of sight. The blindness in this case may be because the cerebellum is crowded down by the pressure of the tumor upon the corpora quadrigemina. As each optic nerve supplies the inner half of one eye and the outer half of the other, paralysis of the visual cèntre, through pressure on the cerebellum or optic nerves, may cause blindness. The upper visual centre (in the large convolution on top of the cerebral convolution) is probably in the same position first in the human brain as in that of the monkey.

In this instance the lesion is most probably not near the corpora quadrigemina. There is scarcely room for the growth of a tumor in the corpora quadrigemina without its causing pressure upon the medulla oblongata, and so producing local paralysis, which is not present in this case. The next possible situation for a tumor is in the cerebellum. What symptoms have we here of cerebellar pressure? The excessive vomiting, the persistent headache, the staggering gait, are all symptoms pointing to a cerebellar origin of the tumor. In some rare cases of cerebellar tumor there is complete sexual palsy. This is present here to a very marked degree. In other cases of the same disease there is no disorder of the sexual function. The disturbance of sexuality probably occurs in those cases in which the middle cerebellar lobe is the seat of the tumor.

The general loss of muscular power (the man has been confined to bed and entirely unable to walk for a long while) points strongly to the cerebellum as the seat of the disease. When the cerebellum is removed in the lower animals, there is general loss of muscular strength. The blindness may be due, possibly, not to the lesion of the brain, but to some peripheral nerve-lesion. Optic neuritis is very often the cause of blindness. We cannot make out by means of the ophthalmoscope how far the optic nerves have lost their power of visual conduction in the present instance. The outer appearances, too, cannot always be regarded as an accurate measure of the loss of power. The choking of the discs is very decided here. The blindness may be peripheral, but the cerebellar symptoms give me great reason to think that the blindness is central in origin.

The exact determination of the position of a cerebral tumor is sometimes exceedingly difficult. In some instances the sole symptom of the presence of the tumor in the cerebellum is the persistent vomiting. It is easy generally to determine whether vomiting is gastric or cerebral. Position very rarely affects vomiting of gastric origin, whereas, if the vomiting be of cerebral origin, the least change of position is liable to bring on the most painful retching. This man cannot be lifted up into a sitting posture in bed without bringing on attempt at vomiting. When he tries to sit up himself, he vomits profusely. Straining at stool also gives rise to spells of vomiting. There are periods at which his vomiting is much more exhausting and excessive. Sometimes these spells bring him so low that he seems to be at the point of death. The cause of these exacerbations is, no doubt, the temporary attacks of congestion of the brain. Raising the man so disturbs the circulation as to increase his pain and bring on these acute attacks of vomiting. The slightest irritation of the liver or the stomach will upset the balance of the circulation.

Death will no doubt take place during one of these temporary congestions. As regards treatment, we have tried an antisyphilitic course of treatment, but without the slightest beneficial effect. I do not think that there is any history of syphilis in the case. It is needless to say that the prognosis is unfavorable to the last degree. In some rare cases the tumor ceases to grow for a while, and the patient remains in the same condition, unchanged for better or worse, for a longer or shorter period of time; but as a general thing the disease advances rapidly to a fatal termination.

THE MULTIPLE SCLEROSES.

Case I.—The patient, a lumberman by trade, and married, enjoyed good health until some five years ago, when he noticed some stiffness in the muscles of his legs, and gradually began to lose power in his left leg. One year ago his right leg also became affected. His appetite and general health at present are good. He has been a hard-drinking man for the past twenty-five years. He gets tired very easily—has not been able to do any work since last November (1877). There is no pain in his legs.

Is this spinal or cerebral disease? Evidently spinal, because only the lower limbs are affected. In cerebral disease affecting the limbs there is generally hemiplegia or entire palsy of all the limbs. I have never seen a case of cerebral paraplegia.

There is no headache, no irritability of disposition, and no loss of memory here. The case is chronic, and not acute. It is in all probability a form of chronic inflammation of the cord. Tumor of the cord is exceedingly rare, and, moreover, the symptoms in this case are not those of spinal tumor.

This may be a condition following excessive venery. In spinal exhaustion from excessive venery there is a progressive loss of power without spasm. In cases of chronic inflammation of the cord the inflammation may attack either the cord itself, or its membranes. Is this a case of spinal meningitis, or of inflammation of the cord itself? The meninges of the cord are comparatively devoid of sensation. In spinal menin-

gitis the outside of the membrane is affected. Spinal meningitis makes itself felt in the nerve-roots. Paralysis is not necessarily one of the symptoms of spinal meningitis. Here there is permanent contraction of the muscles, as in spinal meningitis, but there is no complaint of pain. This is evidently not a case of spinal meningitis. Other than the above disease there is but one form of inflammation of the cord, and that is sclerosis—generally multiple sclerosis. There is, indeed, a subacute form of spinal meningitis which runs through its course in a few months, but this is plainly not that condition.

Sclerosis is a chronic inflammation of the neuroglia. Multiple sclerosis occurs in little spots, or nodules, and may affect the brain alone, or the cord alone, or both brain and cord. There are consequently three forms of multiple sclerosis, cerebral, spinal, and cerebro-spinal. Multiple cerebral sclerosis is comparatively rare, and its symptoms very obscure. It usually begins with severe, irregular pains in the head; paralysis and tremors, with epileptiform attacks and marked mental deterioration, failure of memory, etc. The most common symptoms are loss of power with tremors. The severer symptoms are only marked in rare cases. In multiple cerebro-spinal sclerosis, the tremors are at first only excited by voluntary movement, but finally they become persistent. Where the spine only is affected, according to some authorities there are no tremors. Where the brain only is affected, the tremors are constant. There is always palsy in all of the three forms; incomplete at first, but gradually producing entire loss of power. In the spinal form the palsy is the main symptom. In many cases there are periodic convulsive movements of the limbs. In multiple spinal sclerosis the symptoms become more and more severe, finally tonic contractions of the muscles of the hands and legs supervene. Cases such as the above, though obscure, will sometimes come to your notice. Multiple spinal sclerosis may affect either the anterior or posterior columns of the cord.

The etiology of the multiple scleroses is exceedingly obscure. In some instances they are brought on by exposure to wet and cold. In many reported cases the inception of the disorder dates back to some mental strain or overwork. I have never heard of a case brought on by syphilis. Such an origin is easily possible, however.

This case is interesting because of the total absence of tremors. Hammond states that he never knew of the occurrence of tremors where the spinal cord alone was affected (*i. e.*, tremors excited by attempts at voluntary movements). Here the trouble is purely spinal. Multiple spinal sclerosis generally runs a very protracted course. This is an excellent type of the disease. Progressive loss of power and persistent rigidity are the two most pathognomonic symptoms. This man cannot walk at all over rough roads. It is a great effort to him when he attempts to raise his foot. A time will come, unless the disease is stopped, when it will be impossible for him to raise his feet.

In most cases of multiple spinal sclerosis some one group of muscles is affected more than others. All the muscles, however, become in time affected. In tabes dorsalis and locomotor ataxia the genital function is affected. In this disease it is not. The sensory portion of the cord is generally also affected. Here there is entire absence of pain. The pains are never so severe as those of locomotor ataxia.

As regards the causes of the disease, as I said above, we have no accurate knowledge. Exposure, excessive use of alcoholic stimulants, and syphilis may, any of them, produce the disease.

Treatment does little or no good. Some authorities use ergot in the early stages, but I have never seen ergot have any effect whatsoever. The actual cautery may do good in very early stages. Dr. Hammond claims some good results from the administration of fifteen drops of the chloride of barium thrice daily. He also recommends the use of the tincture of hyoscyamus; but neither of these remedies have had any effect whatever in my hands. The galvanic current may be employed, but usually fails utterly to produce any good result.

The case to which I have just directed your attention is one of multiple spinal sclerosis. I am also able to show you to-day cases illustrating the two other forms of multiple sclerosis.

Case II.—R. Mc., born in Ireland, dates the beginning of his disease back to 1875, when he overstrained his wrist in piling bricks. Immediately after that time the part began to tremble, and in one year the whole limb was involved. He was admitted to the wards in March, 1878. A few months ago the tremors extended to his whole body. These tremors are constant, and are very much aggravated by any excitement, or the least physical exertion. In this case there was palsy of the right arm before the appearance of the tremors. (This order, however, is very frequently reversed.) The patient generally has a bad headache when he gets up in the morning, and is very easily fatigued. There is no failure of memory as yet, and his eyesight is not affected. In some cases there is constant twitching of the eyelids. I cannot say positively whether or not this man has tremors while asleep. He has no difficulty in walking up and down stairs; can go down-stairs without the assistance of the baluster. There is no festination in this case. It is an example of multiple cerebral sclerosis in which the tremors are constant. This man, unfortunately, is beyond all treatment. The disease was evidently brought on by exposure.

Case III.—A sailor, of middle age, a German by birth. Has had syphilis and gonorrhœa frequently. First noticed the tremors one very rough day at sea, when he was in the rigging. The tremors are only excited by physical exertions, such as walking, etc. (In neither of the cases has there been any trouble with the bladder.) This man has festination very markedly. He says he feels as if some one were constantly pushing him forward as he walks; he has a continual, irresistible tendency to go forward until he gets into a regular run. He can go upstairs alone, but in going down-stairs he has to take hold of the baluster to keep himself from falling. This is a case of multiple cerebro-spinal sclerosis. It presents, as you have no doubt noticed, many of the symptoms of locomotor ataxia. The disease in this case is no doubt the result of constitutional syphilis.

Treatment of Trichinosis.—In the treatment of this infection, Dr. Rhode administers a subcutaneous injection of morphine at night, because he has observed that the morning remission in the fever is much greater when the patient has passed a quiet night. He also uses laxatives. In one case in which he prescribed a one per cent. solution of ergotine (a teaspoonful every hour) on account of excessive epistaxis, he was surprised by the rapidity with which the symptoms produced by the trichinæ disappeared. Further trials of the drug in other cases have confirmed his opinion as to its favorable action on the course of the fever and of the disease in general. As much as two drachms of ergotine have been used in one case.—*Centralblatt f. d. Med. Wissen.*, No. 17.

Original Communications.

A NEW METHOD OF HASTENING THE SUPPURATION OF ACUTE AND STRUMOUS (COLD) ABSCESSES.

By A. D. ROCKWELL, M.D.,

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NEITHER in published volumes nor journal articles have I observed any reference to the power of electricity, externally applied, to develop and hasten the suppurative process.

I do not, of course, refer to the development of suppuration in healthy tissue.

Electricity, except when applied especially for electrolytic effects by means of needles, has no such destructive tendency; on the contrary, it will, as is well known, frequently abort developing inflammations and small abscesses, such as styes, etc.

I refer not only to the power of the electric current to hasten the development of the ordinary phlegmonous or acute abscess, but also to excite and fully develop the arrested process of suppuration in strumous or so-called cold abscesses.

During the past ten years there have fallen under my observation a sufficient number of such cases to convince me that the effects to which I have alluded can be quite readily and uniformly obtained, and must therefore be of interest to every physician and surgeon. In regard to the current best adapted for the purpose under consideration, I have no hesitation in designating the faradic, on the grounds both of observed clinical results, and of the physical, physiological, and other distinctions in the action of the two currents, galvanic and faradic.

Electricity, in passing through living tissue, exerts effects of a four-fold character, viz.: physiological, chemical, physical, and mechanical, and it is probable that all of these effects enter more or less as factors in increasing the activity of the suppurative process. The physiological effects take place by virtue alone of the vital properties of the tissues, and, in the case of cold abscesses at least, with their low order of vitality must be very indifferently manifest. The chemical or electrolytic effects are especially the result of galvanic action, and ought to exert considerable influence in hastening suppuration. By external applications, however, but little of this influence can be observed. The physical effects, viz., the production of heat and the modification of endosmose and exosmose, and the transference of substances from one pole to the other, while more marked in the use of the galvanic current, are yet sufficiently decided after an application of the faradic.

The mechanical effects, however, exert a far more potent influence in hastening suppuration than all the others, and these effects are more markedly appreciated under the faradic current. The reason is clear from its nature. "It is a current of alternation, of to and fro motion, of constant closing and breaking. When it passes through the body, even when it produces no appreciable muscular contractions, it acts very much in the same way as gentle tapping or pounding or rubbing on the tissues; and this gives passive exercise to all the deeper-lying as well as the superficial tissues. We may believe that the molecules of the tissues are agitated by the passage of the current, as the particles of a bar of iron are moved by the influence of magnetization, or as bodies are expanded by heat." * The numerous branch currents going to and fro act as so many shuttlecocks, keeping every atom in incessant disturbance.

Now, while it is by virtue, in part, of these phenomena that we obtain tonic and restorative effects in ordinarily vitalized tissue, we can readily understand how, when acting on parts where the destructive process has begun, they may act as an excitant and very materially accelerate the breaking down of tissue and the consequent formation of pus. The case which first suggested this method of utilizing electricity occurred in the person of a Mr. R., aged 35, directed to me in 1867, by the late Dr. H. H. Gregory, for the relief of a supposed severe and persistent lumbago. The patient presented an exceedingly haggard and emaciated appearance, and was so weak that he could with difficulty walk without support. He had been suffering pain more or less severe in the lumbar region for several months, and had gradually grown thinner and weaker. A few local applications of the faradic current failed to afford the slightest relief; on the contrary, the pain was somewhat aggravated, and on examining carefully I observed a slight swelling that had appeared since the beginning of treatment, together with a well-marked reddish tinge of the surface.

Because of these symptoms, as well as of the failure of the electricity in any way to relieve the pain, and the profound constitutional disturbance out of all proportion to a mere local rheumatic attack, I suggested the probability of extensive suppuration, and advised him to see Dr. Wm. H. Van Buren, who confirmed the diagnosis and directed him to go immediately to his home in Elizabeth, N. J., since the necessary operation would not be altogether devoid of danger. The lancing was performed by Dr. Green of that city, and I am informed that the abscess discharged a quart, more or less. For the first twenty-four hours during and after the evacuation of the pus, the patient was with difficulty sustained by the free use of various forms of stimulants. This case alone would not of course be conclusive evidence of the instrumentality of the electricity in rapidly hastening the suppurative process; but the patient, whose strength was failing with alarming rapidity, always attributed his salvation to the fact that his true condition was discovered without further delay, and before he had quite lost all strength and recuperative energy. In a number of additional cases of phlegmonous abscesses I have had occasion subsequently to verify the idea suggested by the above, and notably in several cases of slowly developing abscesses of the mammæ and tonsils. In the case of a friend who was a victim to frequent attacks of tonsillitis, the applications proved remarkably and most gratefully efficacious.

For years these attacks had occurred once or twice every winter, and by no treatment had it been possible to abort the inflammation short of suppuration. Pus formed slowly, and it was usually ten days before the abscess broke. Soon after the beginning of one of these attacks, the faradic current was applied for some ten or fifteen minutes, and repeated every day. Pus formed rapidly, and in five days from the beginning of the stage of irritation the abscess broke, shortening the time of the patient's confinement to the house one-half. In subsequent attacks this experience was repeated.

Turning attention now to the strumous or so-called

* Medical and Surgical Electricity, 2d Edition, p. 189, Beard & Rockwell.

cold form of abscess, I have to present a case which cannot fail to be of additional practical interest.

Mr. R. C., aged about 30, a patient of Dr. S. T. Hubbard, was sent to me in November, 1876. I found a tumor about the size of an orange, situated on the right side of the neck, partially under the body of the sterno-cleido-mastoideus muscle. In 1869 he had received a severe strain while rowing in a college regatta, and soon after, this unsightly enlargement made its appearance. He had been under the care of Dr. Sieveking, of London, and afterwards of Dr. Piersons, of Orange, N. J., who had used the galvanic current (external applications).

Supposing (with the others whom he had consulted) that it was either a solid enlargement or an ordinary cyst, I proposed electrolysis; but in view of the fact that the patient thought it had decreased a little in size under galvanization as used by Dr. Piersons, and desired a continuance of the trial, the introduction of the needles was postponed. I alternated faradic with galvanic applications, and in about two weeks, instead of observing a decrease in size, or, as I had expected, no change whatever, the growth appeared perceptibly larger. It was evident to my mind that pus was forming, and on the following day the late Dr. A. B. Crosby, who saw the patient with me, introduced a small trocar, which on withdrawal showed a slight but sufficient trace of pus. I continued the applications several weeks longer, the enlargement gradually increasing and growing more sensitive until it was pronounced quite ready for an operation. Etherizing the patient, Prof. Crosby made a free incision, perhaps four inches in length, down to the cyst-wall, or, as it is technically called, the pyogenic membrane. This wall is said to increase in density with age, varying from the eighth of a line to an eighth of an inch in thickness. In this case the membrane was fully an eighth of an inch thick, exceedingly vascular, and of such a consistence that the knife could with difficulty penetrate it.

The discharge of pus was very great, probably half a tumblerful or more.

The usual after-surgical treatment was employed, and after the healing of the wound no trace of an enlargement was visible, and to this date the patient has had no further trouble.

Without attempting to compare the relative merits of electrical applications and the ordinary poultice in acute surface abscesses, it is evident that the first method is a useful therapeutical addition in dealing with abscesses that are not readily accessible. In strumous or cold abscesses, however, I know of no substitute for it of equal efficiency, and the results obtained in the case last cited very clearly demonstrates its value.

46 East Thirty-first Street.

PLEURISY IN CHILDREN.

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Pleurisy occurring in children, notwithstanding the progress that has of late years been made in pediatrics, is a disease that is daily overlooked or misinterpreted by the general practioner. It is an affection that is easily confounded with either croupous pneumonia or fibroid degeneration of the lungs, and it is too frequently treated for either dentition, intestinal worms, continued fever, meningitis, or peritonitis. All of these affections have been supposed to exist, when in reality a pleurisy with effusion was present. This fault is due to two facts: first, an unpardonable carelessness in the manner of examining patients, and secondly, to the want of a proper appreciation of the physical signs and symptoms of the disease.

There are certain physical signs and symptoms connected with pleurisy occurring in children, similar to those found in the pleurisy of adults, but there are many other and important ones entirely different, and which in themselves often vary considerably, that furnish a key to the recognition of pleurisy in children.

Pleurisy occurs in children either as a primary idiopathic disease or as a secondary affection to certain diseases, as pneumonia, scarlatina, tuberculosis, pertussis, measles, and small-pox. It has also occurred as the result of an injury to the chest-walls. Formerly it was considered rare under five years of age, the primary form rarer than the secondary; but, with improved methods of diagnosis, it is now regarded as a question whether it does not occur more frequently at a much earlier age than we were aware. There is no doubt but that many cases of acute idiopathic pleurisy with slight effusion occur in young children, where recovery is spontaneous.

The main object of this article is to discuss the differential diagnosis of pleurisy in children. For this purpose it will be necessary, in the first place, to describe the physical signs and symptoms of the disease.

A child is suddenly taken ill with a rigor, or, if very young, possibly a convulsion, followed by a variable degree of fever, the temperature rising to 103° F., or even 105° F. The heat of the skin is not pungent, and the fever seldom lasts longer than three or four days, when it declines gradually. There may be severe headache, with delirium, and if the right side is affected, vomiting of bilious matter, with perhaps purging. The respiration is hurried, shallow, and jerky, the latter quality being more marked in the first stage. The pulse-respiration ratio rarely falls below three to one. Pain is complained of in the side, or more often the case, in the abdomen. It is confined to one spot, and may persist until absorption occurs. The pain is referred to the abdomen, because the lower intercostal nerves that are affected send branches to supply the abdominal walls. The pain is increased by coughing or upon taking a deep breath, which is shown in the face of older children by an expression of distress, and in very young ones by a prolonged spell of crying. There is also tenderness of the chest-walls, which is elicited in older children upon percussion, and in younger ones upon movement or lifting. There is usually a frequent, short, dry cough which the child tries to repress on account of the pain it causes. This cough may sometimes be so slight as not to be noticed, or else may be attributed to reflex causes. The child seldom appears very sick, and the strength is very little or not at all reduced.

The movement of the affected side is less free than the sound side from the onset. This is due in the first stage to the avoidance of pain, and later on, to a lack of expansion from pressure of the effusion. The intercostal spaces are not, however, always motionless. There is often an apparent deep recession of the lower intercostal spaces, which is nothing more than the action of the digitations of the serratus magnus muscle, lifting up the parts beneath. If the effusion is extensive, the chest-wall of the affected side becomes flattened laterally so as to assume a square shape.

On auscultation the respiratory murmur is feeble,

especially at the base of the affected side, and may be accompanied or not with crepitant râles. These crepitant râles are the friction-sounds in children and are similar in character to the râles of the smaller bronchial tubes as heard in adults. They are superficial, heard during the entire inspiratory act, and may persist even after extensive effusion has occurred. They may be heard over the entire dull area. They are sometimes heard only at the decline of the attack, and in other cases not at all, owing to an early adhesion of the pleural surfaces. Bronchial breathing may be heard from the very first, or it may be present one day and not the next. It usually occurs about the second or third day of the attack. It is best detected near the spinal column at the posterior upper limit of dulness. Tubular or even cavernous breathing is commonly heard in the axillary and infra-axillary regions. It may even be heard at the extreme base of the affected side. Both tubular or bronchial breathing may be heard over the same spot where a crepitant friction râle is heard.

Vocal resonance is exaggerated and may be bronchophonic or slightly ægophonic. It may be suppressed over a spot where the breathing is bronchial or tubular. It is best detected at the upper limit of dulness in the interscapular space.

The vocal fremitus is indistinct, but not always absent. It may be present even with extensive effusion. In very young children the alteration of the vocal resonance and fremitus is for various reasons unreliable. All of the auscultatory signs are altered on change of position.

Dulness is complete where effusion has occurred, and *extends to the front*, being there lower than in the back. Before effusion of any extent occurs, the resonance of the affected side is impaired, and the note is of a high pitch. The dulness is accompanied with a *sense of great resistance* imparted to the finger. The limit of dulness is *abruptly marked*, being sharper defined anteriorly than in the back. When the effusion extends above the angle of the scapula, there is a tubular note produced in front below the clavicle. It occasionally occurs that the percussion note has a tympanitic quality, where there is a thin layer of fluid between the lung and a thin chest-wall. Here the use of auscultatory percussion will render the dulness more distinct.

There is a movability of the dulness on change of position, which is best detected, in cases of large effusion, after absorption has begun. "In rare cases, dulness with great resistance, together with feeble respiratory murmur on the affected side, may be the only physical signs to indicate the early stage of a pleurisy in children." (West).

When the effusion is very large, the heart is liable to be displaced either to the right or left, according to the side affected; but it may be displaced to the left even when the effusion is on the same side. This *is* owing to adhesions existing between the pleura and pericardium, as pointed out by Eustace Smith. The heart is also forced below the xyphoid cartilage when extensive effusion occurs in the left pleural cavity. An effusion of the left side may depress the spleen, and on the right side the liver.

The measurement of the affected side will be greater than the sound side during the first ten days or two weeks, but equal afterwards, owing to the greater expansion of the sound side from doing double duty. After absorption, the affected side may contract, where the effusion has been large, and a deformity of the spine exist, both of which disappear in the course of time.

In distinguishing pleurisy from dentition, worms, typhoid fever, meningitis, or peritonitis, a correct diagnosis cannot be obtained without a thorough examination of the thorax has first been made. The slight cough alone should attract the suspicions of the attending physician sufficiently to warrant a thoracic examination. The headache, fever, abdominal pain, and, when the pleurisy is diaphragmatic, purging with abdominal tenderness, also, as I have observed in one case, epistaxis, might lead to the suspicion of either a commencing typhoid fever, or peritonitis. The headache with delirium and vomiting might suggest meningitis, for which I have seen two cases treated. In all such cases a careful thoracic examination should never be omitted before arriving at a diagnosis.

Pleurisy is more frequently mistaken for croupous pneumonia than any other disease, and not without good cause, as the distinction is sometimes very difficult to be made. More particularly is this the case when the pleurisy is secondary, or, if primary, a double one. Fortunately, the treatment of the early stage does not differ materially for either disease, but where the pleurisy is secondary to scarlatina, for instance, it is important to be able to recognize an effusion early, as it rapidly increases and becomes purulent, and may suddenly destroy life.

Scarlatina is rarely followed by pneumonia, while measles is more rarely followed by pleurisy. The feebleness of the respiratory murmur, which may previously have existed in such cases, first on one side, and then upon the other, together with bronchial breathing and a flat dulness extending to the front, will point to pleurisy rather than to pneumonia (West).

In distinguishing pleurisy with effusion from croupous pneumonia, it must be remembered that the general symptoms of the former are mild as compared with those of the latter. There is greater prostration, flushing of the cheeks, and dilatation of the nostrils in croupous pneumonia than in pleurisy. The skin is dry, and the heat pungent in croupous pneumonia; in pleurisy it is the opposite. The temperature falls suddenly in the first and gradually in the latter. The dulness in croupous pneumonia is incomplete, with slight resistance, and, except when the apex is involved, is *confined to the back*. In pleurisy it extends to the front as well, and is, as before mentioned, perfectly flat, with a sense of great solidity imparted to the fingers.

The crepitant ronchus in croupous pneumonia is very fine and heard in a puff at the end of inspiration. It is never heard over the same spot where there is tubular breathing. In pleurisy the crepitant ronchus is coarser, is not limited to the close of the inspiratory act, and may be heard over the same spot where there is tubular breathing. In pleurisy the physical signs of the disease may indicate the involvement of the affected side from apex to base; in croupous pneumonia this is seldom the case. There is no alteration of the physical signs on change of position in croupous pneumonia as there is in pleurisy with effusion. In fibroid induration the dulness is not abruptly limited, and is not altered on change of position.

Whenever a doubt exists in the mind of the physician in regard to the diagnosis of even the simplest case of pleurisy, it may at once be cleared up by an exploratory puncture of the chest-wall with an ordinary hypodermic syringe, as recommended by Eustace Smith, and later by Drs. Barlow and Parker, of London. The operation is perfectly harmless, does not give much pain and may be repeated several times if necessary. The puncture is best made in the intercostal space, im-

mediately below and on a line with the angle of the scapula. When the effusion is localized or circumscribed, as is sometimes the case, the puncture is advised, by the last mentioned writers, to be made over the centre of maximum dulness.

I have frequently found the withdrawal of a syringeful of fluid, obtained on exploratory puncture, to rapidly hasten the absorption of the effused fluid. This has been explained as due to the relief of pressure stimulating the absorbents of the pleura.

The following cases, taken from my note-book, may serve to illustrate the various features of pleurisy in children.

CASE I.—A girl, two and a half years old, had been sick three years when first seen. Temperature in the rectum, 105° F. She had a slight cough and had ceased to play. She did not appear to be very sick. On examination of thorax, dulness, which was abruptly limited, was detected at the base of the right lung, in front, extending up to an inch below the nipple. Coarse subcrepitant râles were heard on auscultation, with bronchial breathing and bronchophony in front, over the dull area. In the back the dulness was not so well defined, and the auscultatory signs were less marked than in front. Six days after, dulness was found on the left side in the back and extending to the front. Temperature in the rectum was 102⅕° F. Bronchial breathing with subcrepitant râles were heard over the dull area. There was vocal fremitus on both sides. The vocal resonance was of an ægophonic quality on the left side, more marked at the upper limit of dulness. The dulness had not extended on the right side. An exploratory puncture with the hypodermic syringe was made on the left side, and clear serum withdrawn. Small doses of infusion digitalis, together with syr. iodide iron were given, and a complete recovery ensued in eight days. The temperature returned to normal two days after the puncture was made.

CASE II.—Sarah R., age nine years, seen May 1, 1878. Was attacked with a chill on the evening of April 27th, followed by fever and vomiting. At the same time she complained of a sharp pain in the left side, extending to the abdomen, and a slight cough. A physician was called in, who diagnosed the case as one of gastric trouble, and prescribed a preparation of rhubarb.

On the morning of the above date, when I first saw her, she had a sallow complexion, a distressed look, no flush of cheeks, but some dilatation of the nares. She had a severe epistaxis the night before, and a tendency to a return of it that morning. The skin was dry, temperature 102⅘° F. in the rectum, pulse 140, respiration 56. She still complained of the pain in her side and abdomen, which was increased on coughing and taking a deep breath. She had a short, dry cough, which she evidently tried to suppress. Her breathing was superficial and jerky. On auscultation, the left respiratory murmur was feeble over the base of the lung, and there was bronchial breathing at the inferior angle of the scapula and in the interscapular space. No râles were heard posteriorly, but a few coarse crepitant ones were heard in the left infra-axillary space. Vocal resonance was obscure at the base, but bronchophonic at and a little above the inferior angle of capsula. The mobility of the left side was less than the right. Dulness was complete over the base of the left lung posteriorly up to the angle of scapula, and in front up to an inch below the nipple. The sense of resistance was very marked. There was some tenderness on percussion. The apex of the heart was felt to beat on a line with the nipple and one inch below.

A puncture was made with the hypodermic syringe, and slightly turbid serum widrawn.

The following day the temperature was 99⅘° F. in the rectum, pulse 100, respiration 32. The bronchial breathing was absent, the other signs about the same. She was seen twice afterwards, and recovered entirely in ten days. She was treated with counter-irritation applied in a small spot over the back, and infusion of digitalis first, and afterwards sulphate of cinchonidia as internal remedies.

CASE III.—Margaret McD., one and a half years old, had been subject to a slight cough for three weeks, which did not cause any anxiety to the mother, as she supposed that it was due to teething. The child was growing no better and began to show signs of wasting, when it was seen by one of the sanitary physicians, who treated it for summer complaint, though the mother stated that its bowels were not loose, nor did it vomit. The patient did not look very sick when I saw her. Her breathing was shallow, temperature 100° F. in the rectum. She took her food well, but would not play. The child was dirtily dressed, and I placed my hand over the back in order to detect any râles. Some were distinctly felt over the left side, which led me to use percussion, when I found a perfectly flat dulness, extending over the entire back of that side. There was a tympanitic quality of the percussion note at the upper third of dulness. In front the dulness extended up to the clavicle of the left side. Such an extent of dulness, together with such mild general symptoms could in my mind be due to an effusion of fluid only, and to verify my diagnosis, I inserted my hypodermic syringe and drew it full of clear serum. Auscultation was not used, unfortunately, as I was pressed for time, and there was no further doubt of the diagnosis. I prescribed a mixture of digitalis and iron, and the case recovered promptly.

75 WEST FIFTY-FIFTH STREET.

PARALYSIS OF THE DIAPHRAGM.

BY BENJAMIN EDSON, M.D.,

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JUNE 25, 1875, I was summoned in haste to Mr. A., about 24 years of age, broker, married, a man of good habits, but naturally spare and thin in flesh. I found him on the bed, tossing violently, in vain efforts at respiration. His attitudes and movements were very suggestive of opisthotonus. Hurried examination—the best that could be made under the circumstances—showed that that was not the condition, neither was there evidence of asthma, the apparent trouble being a dyspnœa from simple inability to draw air into the lungs. There was little opportunity for obtaining a history of the case. The day had been hot and oppressive, and it was learned that he had been somewhat exposed to the rays of the sun, and it was accepted that the heat had, in some not clearly defined measure, been partially, at least, responsible for the dyspnœa. Death seemed imminent, and in the emergency morphia was freely administered, followed by measurable relief. The duration of the most alarming stage of paroxysm may have been twenty or thirty minutes.

The arrival of the family physician, to whom I resigned the case, relieved me from its further care.

May 15, 1877—two years later—I was again called to the same patient, and found that during the day he had suffered from embarrassed respiration. At

this time the symptoms were less severe than when I saw him two years before. Each inspiration, however, required a distinct, thoughtful effort, as did also each expiratory act. About every eighth or tenth respiration was longer than the average, and accompanied with a deep expiratory sigh or moan. The countenance wore a wild and anxious expression, and the man appeared to be most thoroughly frightened. There was great nervousness, but no distinct localized pain. There was partial numbness, with marked pricking sensation in the extremities.

A careful examination revealed no derangement, structural or functional, of heart or lungs. The digestive organs gave no indication of being the seat of the trouble. Neither in the history, nor in what I had seen of the case, was anything of an epileptic character discoverable. The history disclosed that every year since 1873, on one of the early hot days in May or June, he had been similarly affected. There had usually been for a day or two some premonitory symptoms of the coming attack of dyspnœa, indicated by labored breathing and a general feeling of uneasiness and alarm. No known cause could be assigned which was suspected of producing this state. He thought that mental anxiety might have had something to do with it, and yet at other times even greater mental solicitude in business had not been attended by such results.

When he had recovered from the one severe annual attack, he remained wholly exempt from another until the next year. He felt nothing of it nor like it during the interval. He endured heat as well as the average of people.

At this time, closely confined to his office in New York during the day, he had been in the habit of omitting his lunch at midday, eating nothing from morning until 6 o'clock P.M. I advised a lunch at noon, prescribed bromide of potassium, and, in view of any possible digestive trouble, bismuth and pepsin.

May 17th—two days later—I was hastily summoned, to find Mr. A. decidedly worse. On his way home he had seen a man have a spasmodic attack of some kind, and that was charged, rightly or otherwise, with precipitating the paroxysm of Mr. A., which had been impending for two or three days. I found him apparently suffocating, wildly clutching, and in every way possible evidently beseeching for air. His conviction was that he was dying. The extremities were cold and benumbed; venous side of circulation highly congested; heart laboring, but its action was less disturbed than would naturally have been expected. At each inspiratory effort the abdomen was greatly depressed or *contracted*, while in the occasional efforts at expiration the abdominal region was markedly *expanded*. The immediate trouble seemed to lie in his inability to depress the diaphragm. The other respiratory muscles did not appear to be in any way affected.

It was not found practicable to aid him by any mode of artificial respiration. Sinapisms to the extremities, friction, with morphia hypodermically, did not give prompt nor marked relief. In the most urgent extremity, I tried nitrite of amyl by inhalation, with perhaps a little benefit. The quantity apparently administered seemed large, but it was difficult to judge how much the patient actually inhaled. The administration of a full dose of hydrate of chloral was soon followed by a subsidence of the severe symptoms. The breathing became possible, and still easier, although for some hours each act of respiration required conscious thought and effort. After two or three days of rest, he again resumed business as usual, and during all the hot summer weather had no further trouble with dyspnœa.

June 28th of this year he was threatened with another attack. He had been taking hydrate of chloral in small doses whenever any of the prodrometra of his affection were manifested. On this day he exhibited unmistakable symptoms that a severe paroxysm was impending. A prompt resort to chloral in increased doses relieved the embarrassed respiration. I do not undertake to explain the *rationale* of its action, nor do I advocate or defend empiric treatment, except so far as it is the best available in a given emergency. In this case I have reason to be satisfied so far as mere *result* is considered, as it is the first season in six years that he has escaped a culmination of his complaint in violent and most fearful paroxysms.

So far as I know, the literature of this affection is scanty. The ordinary text-books contain not even an allusion to it. In Da Costa's Medical Diagnosis it is referred to as *paralysis*, or *want of power of the diaphragm*. In Vol. XI. of Ziemssen's Cyclopædia is a brief reference to the same derangement. None of the causes there referred to will account for all the peculiar phases present in this case. I have followed out carefully such theories as have occurred to me, or have been suggested to me by others, but thus far they all fail to account for the facts. I can only say that it is a case of paralysis of the diaphragm, and that I have not the remotest idea of the cause.

It seems probable that the diaphragm could be brought into action through the phrenic nerve by means of electricity.

The points worthy of note are:

1. That the disease is a comparatively rare one.
2. That in this case it appears on a day more than usually warm in May or June of each year.
3. The singular fact that it appears *only* in those months—at no other time during the year—and under the condition stated.
4. That hydrate of chloral has seemed to have power to modify and to prevent the paroxysms.

83 St. Mark's Av., Brooklyn.

Reports of Hospitals.

CHILDREN'S HOSPITAL, PHILADELPHIA.

[Prepared for The Medical Record.]

Service of H. LENOX HODGE, M.D.

(Reported by Dr. John Madison Taylor, Resident Physician.)

VESICAL CALCULUS IN THE FEMALE.

L. S., æt. 9, admitted May 24, 1877. Had enjoyed good health for a long time previous, with the exception of an attack of scarlet fever when she was about seven years of age. This attack lasted six weeks, and was followed by what was to all appearances a good recovery. About six months after complete convalescence from the attack of scarlet fever, her mother noticed that the child "walked queer," and was manifestly less active than usual. Her appetite began to fail, and she complained of constant pain and weakness, for which she was finally put to bed. There was also pain "across the stomach," apparently in the right and left inguinal, and in the hypograstric regions. These troubles combined in confining the child to bed for seven months, according to the statement

of the girl's mother. The urine passed during that period very often contained blood and mucus. The physician who attended the child said that she was suffering from "disease of the kidneys," and, "perhaps, stone in the bladder."

Upon examination of the patient, after her admission to the wards, a large calculus could be easily felt by passing a catheter into the bladder, or the finger into the vagina. During the examination, made while the child was under the influence of ether, there was marked prolapse of the rectum.

The urine yielded the following results upon careful analysis: reaction, alkaline; albumen present, but no bile nor sugar; pus-corpuscles, and ammonio-phosphates of magnesium abundant; urates, epithelial scales of bladder, and bacteria present in small quantities; no tube-casts found.

The child appearing entirely comfortable, it was decided to remove the stone on Saturday, June 2d, upon which day the operation was performed. The urethra was dilated sufficiently to allow the index finger and a pair of forceps to pass into the bladder simultaneously, yet the stone proved too large to be removed entire. It was accordingly crushed, the larger portions removed with the forceps, and the débris washed out by Clover's apparatus. The weight of the collected fragments was 545 grains. The largest fragment was one and five-sixteenths inches long, fifteen-sixteenths of an inch broad, and seven sixteenths of an inch thick.

A qualitative analysis of the stone gave the following results: carbonate of calcium, phosphate of ammonium and magnesium, and uric acid.

June 3d.—Patient much relieved. Temperature ran up to 101⅕° on the day of operation, but was never any higher, and by June 14th was about steady.

June 20th.—Great improvement; incontinence of urine less marked.

June 25th.—Dressed, and allowed to walk about the wards. No pain.

July 26th.—Discharged perfectly cured. No incontinence of urine. Gained steadily in flesh after operation.

Progress of Medical Science.

Aphorisms on Cancer.—In a paper with this title, read before the Sixth Congress of German Surgeons, in Berlin, Prof. Esmarch detailed a number of interesting cases illustrative of the development of cancer from benignant growths, and of its treatment. He has met with four cases in which the malignant growths developed from atheromatous tumors of the scalp, and has repeatedly observed the cancerous degeneration of cicatrices, particularly those of lupus. The results of his observations have convinced him that a predisposition to malignant new growths is given in the hereditary scrofulous and syphilitic dyscrasias.

In the treatment of desperate cases that are too advanced to permit of removal by the knife, Prof. Esmarch places most reliance on arsenic, which he employs both externally and internally. The fact demonstrated experimentally by Gaethjens, that the internal use of arsenic causes accelerated destruction of albumen and increased excretion of nitrogen, furnishes a rational basis for the employment of the drug in the treatment of malignant tumors. Prof. Esmarch uses it to prevent recurrences after operation, as well as in cases that do not admit of operation. Externally he uses a powder consisting of one part each of arsenious acid and sulphate of morphia, eight parts of calomel, and forty-eight parts of powdered gum-arabic. This powder is sprinkled thickly over the ulcer or wound every day; it exerts a powerful escharotic action, but is at the same time painless and destroys all offensive smell. Internally he gives Fowler's solution in progressively increasing doses. Latterly he has also followed out closely Beneke's recommendation with regard to diet. That author (Deutsches Archiv für klinische Medicin., Bd. XV. S. 538) maintains that the quantities of albumen and of the phosphates in the blood are greatly increased in carcinosis, and that the tumors themselves are very rich in myeline, and hence forbids the use of all articles of food which contain albumen and phosphate of lime, confining the patients as far as possible to the hydro-carbons. Prof. Esmarch gives a diet list, which is interesting, but which want of space compels us to omit. He has also obtained good results from Canquoin's chloride of zinc paste, but it is objectionable on account of the pain it causes. Electrolysis he has employed several times, but only once with any remarkable success. Iodide of potassium given internally, in doses of ʒ i. to iss. daily, and applied locally in powder, has, in his hands, proved successful in several cases of malignant neoplasms, that in all probability had their origin in the syphilitic dyscrasia.

In conclusion, he refers to the liability of confounding ulcerated gummy or tuberculous tumors with cancer, and mentions a case of sycosis parasitica, which was thought to be carcinoma until the microscopical examination revealed its true nature. In consequence of the difficulty of the differential diagnosis, he has made it a rule never to extirpate a morbid growth without previous microscopical examination to determine its actual character.—*Reprint from Langenbeck's Archiv*, Bd. XXII., Heft. 2.

Allingham on the Treatment of Hemorrhoids.—Dr. Matthews, of Kentucky, who has given some very decided objections to the carbolic-acid treatment of piles, and has been sustained by Dr. Van Buren, of this city, now publishes a letter from Mr. Allingham, of London, which contains interesting matter on the same subject. Mr. A. has tried the injection method, following out the plan suggested in this country, but had not been so successful as to be encouraged to perform it in very many cases. He believes that "small, velvety hemorrhoids can be cured by the carbolic-acid injection," but he fears there is some danger of the clot being carried into the general circulation, just as the practice of injecting nævi has been followed by death. He states that he is "still more and more impressed with the absolute safety of the ligature in all large, very vascular hemorrhoids when the ligature is properly and dexterously applied." In small, "villous, or raspberry-looking" piles, Paquelin's thermo-cautery is the treatment. Touching the diseased part (the mucous membrane, not the skin) with the instrument at dull-red heat, the pile will usually dwindle away. Sometimes two applications will be necessary—generally only one. But this treatment is not always radical. In one or two years they recommence to grow, and finally require a ligature. When once this is applied there is almost no danger of a return. He has performed the operation in nearly eleven hundred cases, and has never had a death from any cause. On the other hand, he has used the actual cautery in about two hundred and twenty cases, and has lost two patients from pyæmia.—*Louisville Medical News*, Aug. 31, 1878.

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GEORGE F. SHRADY, A.M., M.D., Editor.

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DIAGNOSIS AND MANAGEMENT OF YELLOW FEVER.

SINCE our last issue we are glad to be able to see signs of some abatement in the force of the epidemic, and the early visitations of frost give hope that the spread of the disease will soon be permanently arrested in some, at least, of its strongholds. There is less danger, too, of the disease extending into new localities, as the local authorities throughout the country are fully awake to the necessity of extreme vigilance, and are carefully watching all refugees from infected districts, and promptly putting them into quarantine, if any show symptoms of the disease. With these precautions, and the thorough disinfection of suspicious baggage and merchandise, we may regard ourselves as quite secure from danger.

As every physician is interested in this especial subject at this time, and may chance to meet with a case of the genuine disease in a refugee, and as comparatively few are practically acquainted with it, we shall venture to summarize the principal symptoms, as distinguished from those with which it may be confounded, noting such peculiarities as belong to this particular epidemic. The period of incubation appears to be variable, sometimes not longer than twelve hours, sometimes several months, but usually only two or three days.

Premonitory symptoms, when they exist, are headache, pain in the lumbar region, languor, with a furred tongue, loss of appetite, and chilly feelings. These symptoms have always varied with the epidemic. Usually the attack is sudden, often coming on when the patient is at work or asleep. In the majority of cases (⅔, Ford) there is a chill of mild character. In this epidemic we hear that the chill is frequently wanting, the headache slight, and the pain in the lumbar region does not come on until the fever sets in. After the chill comes the fever, *the febrile or first stage*. With the rise of the temperature there is also a rise of the pulse, which may reach 110 or 115 on the first day; it is usually compressible. In the early part of the second day the fever is at its height. In sthenic cases it may reach 104° or 108° (Ford), but 105° is the average. The urine is first normal and then diminished in amount, and is apt to be albuminous. The tongue is moist and creamy throughout the disease, very rarely or almost never brown; the edges and tip are red. The higher the pulse and the stronger the fever, the redder the edges and tip (Stub). There is now intense pain in the head, back, and limbs, redness and suffusion of the eyes, moderate heat, and passive congestion of the surface. The bowels are sometimes constipated and sometimes open. Nausea now frequently occurs, the stomach first emptying its contents and then throwing off bile. There is some tenderness over the epigastrium, but it is not marked. The mind is usually clear. Even in this stage the skin may be jaundiced. Hemorrhages may occur from the nose. This first stage may last twelve, forty-eight, and even seventy-two hours. The fever, however, is apt to fall on the second day, and then commences the *second stage*, or stage of remission. The temperature now falls to the normal or even below it, while the pulse will drop to 100. In some cases convalescence sets in at this time, and the disease is at an end. This constitutes a mild case. In most, however, this favorable condition lasts but a short time (from two to twenty-four hours or longer). Patients then are anxious to get up, but there is still vomiting and epigastric pain, and there is apt to be burning thirst. Now the temperature again rises. The stomach gets more irritable, which is due to congestion; glairy and very acid matters are constantly ejected; sometimes there is green bile, or there are black particles, precursors of the black vomit. This latter symptom is regarded as pathognomonic in connection with the other symptoms that have been named. The vomit is reddish brown, claret-colored, or blackish, with a sediment like coffee-grounds; occasionally it is bright red; it is acid to the taste, but not bitter. The evacuations are now usually blackish; yellowness of the skin is to be looked for at this stage. The urine is also very commonly suppressed; it may be passed and contain large quantities of blood, or may consist wholly of blood. The pulse falls low, possibly to 40, or even 30.

To this stage succeeds another, known as the *third stage*—also called, in fatal cases, the period of collapse. There is great prostration and feebleness of the pulse, and, perhaps, coma and convulsions. But few pass through this stage and live.

There is great variety in the type of the disease in any epidemic. The malignant form is characterized by black vomit, or hemorrhages from internal organs. The sthenic form is marked by high fever. The duration of the disease is from three to nine days. Sometimes bilious remittent runs into yellow fever, and yellow fever

runs into remittent, as in this epidemic; and then, of course, the difficulties of the diagnosis are vastly increased. But two other affections are liable to be confounded with it, and they are relapsing fever and bilious remittent. The first is characterized by nausea and vomiting, by the epigastric pains and tenderness, by jaundice, muscular pains, and a species of black vomit; but its marked peculiarity, the remissions, is not shared by yellow fever, which is essentially a disease of one paroxysm. It differs also from yellow fever in that it shows enlargement of the spleen, and has a characteristic temperature course, the evening exacerbation being 2° to 4° higher than that of the morning temperature. There is also no albumen in the urine. In bilious remittent there are decided remissions once or twice in the twenty-four hours, or every other day, the spleen and liver are enlarged, quinine is efficacious, and the disease lasts from nine to twenty-one days, in all of which points it differs from yellow fever.

In the matter of treatment we are not agreed upon any medicinal remedy that will check the disease. There seems to be now a pretty general agreement that the bowels should be opened early, if the patient can be seen in time. A favorite method of procedure in New Orleans is to give a warm mustard-bath for the feet, and then follow it by a warm enema; then the stomach is emptied by ipecac, and if the enema does not succeed, a ten-grain dose of calomel is given. Quinine is then administered in doses of ten grains and upwards.

The expectant treatment is pursued, and only such remedies are given as the case seems urgently to demand. The neuralgic symptoms are combated with stimulating liniments or sinapisms. For thirst, tamarind-water, acidulated barley-water, and sweetened cream of tartar are given. If black vomit threatens, iced lemonade or champagne is given, the latter with some care. The only nourishment allowed is barley-water, or weak gruel by the spoonful. Should collapse occur, it is to be met by iced brandy, mint julep, etc., which, if they be not retained by the stomach, can be administered per rectum. In black vomit it is generally thought best to let the stomach alone. Above all are cleanliness in one's surroundings, good air, rest of mind, and the best of attention from efficient nurses.

SHOT DURING A PERFORMANCE.

A REPORT comes to us from Baltimore to the effect that on a certain evening recently, during the concluding act of a play at Ford's Opera House, an actor fired a pistol which happened to be loaded, and which also happened to hit a boy spectator in the gallery. As this was an extra part of the performance, the victim very considerately made no outcry, and the audience was not in consequence disturbed. After the performance the boy presented himself, when it was found that the bullet had entered the upper part of the chest near the shoulder. Of course the actor was exceedingly sorry, and we presume, although it is not so stated in the report, that the boy shared similar feelings. If the result should be fatal, the verdict will undoubtedly be that of "death from accidental shooting." But is it not time that this tomfoolery of discharging loaded weapons upon the stage should be prevented? This is the third case which has come to our knowledge in a comparatively short period in which persons have been accidentally shot during theatrical performances. Two of these cases terminated fatally, one being an actress shot through the head by a performer who was firing at an apple upon her head; another was a boy who was shot by a stray bullet fired from a circus tent. The sequel of the third shooting is as yet uncertain; but when we consider how easily the accident could have been prevented, we are at a loss to express our condemnation of the carelessness of the acts. The question very naturally arises in this connection, why those whose business it appears to be to fire pistols upon the stage, charge pasteboard batteries, shoot cruel pirates, defend village beauties, or knock apples from senseless heads, should not be compelled to guarantee that their weapons are not loaded with ball. This is generally the rule with all who foolishly play with firearms, and why it should not be enforced in a crowded theatre it is difficult to understand. A few more accidental shootings in places of public amusement will, however, doubtless arouse the public to the necessity for some self-protection. In the meantime let the valiant hero upon the stage strut and fire away as usual.

Reviews and Notices of Books.

HANDBOOK OF THE PRACTICE OF MEDICINE. By M. CHARTERIS, M.D., Professor of Practice of Medicine, Anderson College, Glasgow, etc., with illustrations. Philadelphia: Lindsay & Blakiston. 1878. 12mo, pp. 336.

THE work is very good as far as it goes. It is calculated to give a condensed idea of the practice of medicine for the use of the student and younger practitioner. Although admirably terse, it is little better than an outline of the commoner diseases, contains nothing original, and even as a handbook will not prove satisfactory to the ambitious and painstaking medical student. The work is well printed, handsomely bound, and presents an attractive appearance.

ANATOMY, DESCRIPTIVE AND SURGICAL. BY HENRY GRAY, F.R.S., F.R.C.S., etc., with an Introduction on General Anatomy and Development, by T. Holmes, M.A., Cantab. New American edition from eighth and enlarged edition. To which is added Landmarks, Medical and Surgical, by Luther Holden, F.R.C.S. Philadelphia: Henry C. Lea. 1878. 8vo, pp. 952.

THE announcements of successive editions of Gray's Anatomy within comparatively short periods, while it is not surprising to those who are acquainted with the value of the work, is a convincing proof of its worth to the uninitiated student. It is but ordinary

justice to its merits to say that it has been the standard work of its kind in this country for the past twenty years, and that it is destined to preserve its popularity we have continued evidences in each new issue. Great care has been exercised in correcting old errors and in elaborating all the necessary details which the progress in the study of the science has made necessary. We are now assured that the work is as near perfect as possible, and, as far as we are able from a thorough examination to testify, we are quite confident that the assertion is based upon fact. The present edition has been superintended in its passage through the press by Dr. Richard J. Dunglison, of Philadelphia, whose reputation for accuracy and scholarship is perhaps the best guarantee that will be required for the result claimed. The publishers added considerably to the practical value of the work by the incorporation of Holden's "Surgical Landmarks." The general make-up of the book is not what it should be. The paper is poor, the ink pale, and, altogether, it has a cheap appearance, which is not excusable in a work which should be so constantly consulted and so frequently studied.

ON THE THERAPEUTIC FORCES. BY THOMAS J. MAYS, M.D. Pp. 143. Philadelphia: 1878. Lindsay & Blakiston.

THIS little tract contains much food for thought. The first chapter is devoted to questions of nutrition, in which the author endeavors to show that the fatty foods are much more important as generators of force and energy than the albuminous. The second chapter briefly discusses the "General Law of the Action of Forces on the Animal Body." The third is entitled "Chemical Stimulants," and treats of the hydro-carbons, phosphorus, and oxygen. The fourth includes the bitter tonics, ammonia, opium, iodine, and cold. Chapter Fifth introduces antimony, croton oil, etc. Chapter Sixth treats of the narcotics. Chapter Seven sums up and concludes the work.

Many of the author's propositions are peculiar, and will require for their substantiation a larger array of facts than he has seen fit to bring forward; but if true, of great importance as aids to the elucidation of many obscure problems in therapeutics. On the whole, the book is to be commended, and will be perused with pleasure by those who interest themselves in the higher realms of speculative medicine.

Reports of Societies.

THE AMERICAN DERMATOLOGICAL ASSOCIATION.

SECOND ANNUAL MEETING,

August 27th, 28th, and 29th, 1878.

(Reported for THE MEDICAL RECORD.)

FIRST DAY, TUESDAY, AUGUST 27TH—MORNING SESSION.

THE Association met at the Grand Union Hotel, Saratoga Springs, at 9.30 A.M., August 27th. There were present Drs. J. C. White and Edward Wigglesworth, of Boston; R. W. Taylor, C. Heitzmann, H. G. Piffard, and Geo. H. Fox, of New York; S. Sherwell, of Brooklyn; L. A. Duhring and A. Van Harlingen, of Philadelphia; and I. E. Atkinson, of Baltimore. Among the invited guests present at the sessions of the Society were Drs. Graham, of Toronto, and Burchard, of New York.

After a business meeting with closed doors, the President, DR. J. C. WHITE, made a brief introductory address, and then the first paper was read by DR. ATKINSON, his subject being

THE PIGMENTARY SYPHILODERM.

According to Hardy and Fournier, this was liable to occur from the fourth month to the end of the second year of the disease, was found almost exclusively in females, and generally occupied the lateral surfaces of the neck. The pigment deposit was *café-au-lait* in color, and sometimes formed a well-marked net-work. The spots were smooth, not raised above the surface, and without any desquamation. There were no subjective symptoms, and the affection was very rebellious to treatment, lasting for months, and even years. The reader gave four cases in detail, after which he went on to say that he thought the pigmentary syphiloderm could probably be much more frequently observed than it is at present (and even in males), if it were more carefully looked for. He considered that the pigmentation more closely resembled the stains sometimes left after roseola than any other condition; but in roseola staining there was a clear history of preceding hyperæmia, and, besides, it was much less permanent than the pigmentary syphiloderm. He could not agree with Dr. G. H. Fox, who, in his paper of last year, had classed this affection as vitiligo; for while the enclosed spaces in the dark network might have less coloring than natural, there were equal claims to consider that there was an actual increase of pigment around these. It was a fact, also, that the leucodermatous condition referred to was not constantly seen.

In the discussion which followed the reading of the paper Dr. Duhring stated that he had formerly been rather sceptical as to there being any such thing as a pigmentary syphiloderm, but that within the past year he had met with a case in the wards of the Philadelphia Hospital which he could not doubt was a genuine instance of the affection.

DR. FOX thought that the points at issue could only be decided by the more careful and extensive observations of dermatologists all over the world; but it was his personal opinion that undeserved dignity had been conferred upon the condition referred to by classifying it as a variety of syphilis. On the other hand, he believed it corresponded exactly with the definition ordinarily given of vitiligo.

DR. TAYLOR thought that it was principally confined to the Latin races. He had seen it both with and without the whitish patches, and in a large number of patients, some of whom were syphilitic, and some of whom were not. He considered it a rather significant fact that it occurred by preference in a region which is ordinarily notably free from syphilitic manifestations.

The next paper on the list was one by DR. L. D. BULKLEY, of New York, on

A NEW METHOD OF PERMANENTLY REMOVING SUPERFLUOUS HAIR;

but, Dr. Bulkley being absent, DR. DUHRING read the report of

A CASE OF THE SO-CALLED XERODERMA OF HEBRA.

While the case was one characterized by very extensive lesions, he was induced to believe, from his study of it, that the disease was not necessarily followed by such marked atrophy as had been claimed by Hebra, Kaposie, and Taylor. He considered the name xeroderma (which had been employed for years to de-

note a mild form of ichthyosis) an altogether inappropriate term, for the reason that it does not describe the prominent characteristics of the affection. (Photograph exhibited).

On motion of DR. PIFFARD, discussion on Dr. Duhring's case was postponed until after the reading of Dr. Taylor's paper on the same subject.

DR. FOX then read a paper on

THE PROPER USE OF THE TERM ACNE,

in which he maintained that true acne was always a disease of internal origin, and that it could not be produced artificially. It was discussed by Drs. Wigglesworth, Van Harlingen, Sherwell, Piffard, Taylor, and White, after which the report of

A CASE OF SCLERODERMA,

by Dr. F. P. Foster, of New York, was read by the Secretary, Dr. Taylor.

The disease commenced in the region of the left breast, and gradually extended until the greater part of the trunk and of both arms was involved. The patient's sufferings were so intense (especially from dyspnœa) that it was necessary to give her an enormous quantity of morphia, and at one time she was taking no less than thirty-six grains of the drug in twenty-four hours. The case terminated fatally, without the development of any intercurrent affection.

DR. HEITZMANN thought that there could be little doubt that the case reported was not one of scleroderma at all, but really lenticular cancer.

There was a further discussion by Drs. White, Van Harlingen, and Piffard.

AFTERNOON SESSION.

DR. HEITZMANN read an elaborate paper on

EPITHELIUM AND ITS PERFORMANCES,

during the course of which he detailed his own investigations and observations, and exhibited a number of drawings illustrative of the different points touched upon. He was of the opinion that scientific dermatology must depend on anatomy, and that many things in connection with diseases of the skin which are now puzzles would be satisfactorily solved within the next twenty-five years if the great field for original investigation were thoroughly worked.

DRS. FOX and PIFFARD maintained, on the other hand, that it was by no means possible to base the science of dermatology upon microscopical investigation to any great extent. Clinical work and the study of therapeutics were of more importance, since the great aim sought was to cure disease. At the same time, however, it was very desirable that some who were peculiarly fitted for the task should devote themselves to this class of studies; and such men as Dr. Heitzmann were certainly deserving of all praise for their earnest and self-denying devotion to such work.

The President then read the report of the Committee on Statistics, combined with which there was a special report on the subject of leprosy, some of the cases of the latter being illustrated by fine photographs.

SECOND DAY, WEDNESDAY, AUGUST 28TH—MORNING SESSION.

DR. DUHRING read an extended paper on a

CASE OF INFLAMMATORY FUNGOID NEOPLASM,

in which the history and symptoms, which were of remarkable interest, were detailed with great minuteness. The affection occurred in a lady approaching her sixtieth year, whose family history, with the exception that one case of cancer had been known in it, was good, and whose previous health had been excellent. For some time before the outbreak of her present trouble there was excessive irritability of the skin, as shown by repeated attacks of urticaria. The lesions, which occurred in various parts of the body (but most notably on the forehead and face, where they originally appeared), were principally of two kinds, viz.: flat patches, and round, tumor-like growths. The former were of various sizes, slightly elevated, dry, scaly, and of a chapped and furrowed appearance. When the red coloring faded away, it was followed by dirty yellow pigmentation. The tumors also varied in size, ranging from that of a split pea to that of an egg. They were tuberculous, nodulated or fungoid in character, sometimes soft, and sometimes firm and solid, and were distinctly furrowed or lobulated. The general health remained unimpaired, and the only subjective symptoms of any note were itching, and occasional pain, or a burning sensation. One very remarkable part of the affection was the exceedingly rapid development of the growths. In some instances they remained for a long time, and in others quickly underwent involution, no permanent scars being left after their disappearance. When they were examined under the microscope it was found that the whole of the corium was infiltrated with a new growth, and that the walls of the hair-follicles were also packed with it. In the former the cells were more abundant in the deeper than in the outer portion of the tissue, and they appeared to be homogeneous in character, and not distinctly nucleated. Some, it is true, were nucleated, but none had more than one nucleus. There were no spindle-cells, as far as had been observed.

This case, Dr. Duhring said, was new to him, and he was of the opinion that the affection was a very rare one, the only instances of it on record being two reported within the last six years by Hebra, who called it simply *neoplasma*. That it was of an inflammatory character seemed to be shown by the fact that it was greatly aggravated both by arsenic and iodide of potassium. It added very greatly to the interest of the case that Dr. Duhring had taken the trouble to bring the patient herself to Saratoga, and was thus enabled to present it to the Association. He also exhibited a number of microscopic specimens from the case.

DR. PIFFARD stated that he had seen two cases which bore some resemblance to Dr. Duhring's, one of them having been exhibited at a meeting of the New York Dermatological Society by Dr. Sherwell, of Brooklyn. The case was also discussed by Drs. Taylor, Fox, Sherwell, Wigglesworth, and White.

In conclusion, Dr. Duhring stated that he considered that the patient had improved in a very marked manner during the last three months under the pretty constant administration of the tincture of ergot. It should be mentioned also that two of the tumors (one on the face and the other on the thigh) had been removed by ligation and ablation, and that the result had been most admirable in each instance.

In the absence of Dr. W. A. Hardaway, of St. Louis, the Secretary read a paper prepared by him, on

THE TREATMENT OF HIRSUTIES.

The procedure practised and recommended by him was that adopted by Dr. Michel, of St. Louis, in the removal of wild hairs from the eye-lids, viz., the use of electrolysis. The needle-holder was attached to the negative pole and an ordinary sponge electrode to the positive. The latter was held in the palm of the

patient's hand, and the needle inserted into the hair-follicle, where it was allowed to remain until a whitish froth was observed about it. Epilation forceps were then employed to remove the hair, which would require no force if the operation had been a successful one. The removal of a hair in this way usually occupied from two to five seconds, with a battery of eight elements, and occasioned but little pain. Dr. Prince, of Jacksonville, Illinois, had employed the method with great success, and had invented an ingenious needle-holder, which was presented herewith for the inspection of the members.

When electrolysis was impracticable, Dr. Hardaway recommended the use of chloride of zinc, the strength of the solution employed being two drachms of the caustic to three drachms of water. A few drops of this solution having been placed in a watch-crystal, a small portion of it was to be introduced into the hair-follicle by means of a hypodermic syringe needle; care being taken to remove any of the fluid which might chance to come in contact with any other part.

Dr. Piffard spoke at some length on the subject of the paper. He had been in the habit of removing the hair before performing electrolysis in the follicle, and could not see how Drs. Michel and Hardaway could insert the needle into the follicle while the hair was still there, on account of its extremely small size. He usually employed an irido-platinum needle, the iridium being added for the purpose of giving the necessary stiffness, and the platinum not being liable to rust.

Dr. Fox stated that he could not agree with Dr. Hardaway as to the operation being almost painless. He had employed it in a considerable number of instances, and such had certainly not been his experience, although every precaution had been taken to render the pain as slight as possible. He generally used a simple platinum wire, which could be drawn out more finely than a steel needle, and which passed into a hair follicle very much as a bougie into the bladder.

Dr. Heitzmann had formerly employed strong nitric acid on the point of a nickel-plated pin, with considerable success, as he thought at the time; but finding, after a more extended experience, that the hairs almost always returned in the course of time, he had abandoned the method. He confessed that he was rather sceptical in regard to the permanent removal of hair either by electrolysis or any other means that had as yet been devised.

Dr. Taylor reminded Dr. Heitzmann that the use of nitric acid in this way was not at all comparable to electrolysis, since the greater part, if not all of the acid, must necessarily get wiped off of the point of the pin before the latter reaches the bottom of the follicle.

Dr. Duhring stated that he had recently employed with fairly successful results a three-sided needle, which was introduced directly into the follicle; after which three or four turns were given it, and as soon as a small drop of blood appeared upon the surface, it was removed. The method had been suggested to him by Dr. Bulkley, and it had the merit of not causing any pain.

AFTERNOON SESSION.

Dr. Piffard read a report of

A CASE OF GANGRAENOPSIS

occurring in a syphilitic child of one year, and terminating fatally. The mother of the child was also suffering from constitutional syphilis. The gangrene spread rapidly, notwithstanding the treatment employed, and involved nearly the whole of the face by the time death occurred, ten days after the commencement of the trouble. (Photograph exhibited.) As regards the etiology of the case, Dr. Piffard thought that only two hypotheses seemed tenable—that it was either malignant pustule or mercurial gangrene; and of the two he considered the latter the more probable. It was certainly a remarkable fact, however, in this connection, that mercurial inunction had been practised on the child only two days when the gangrenous lesion began to develop.

Dr. Duhring said he would hesitate before attributing this pathological process to the small amount of mercury employed in the case, and would prefer to consider it probably of internal origin and obscure. Dr. Taylor also thought these cases were of idiopathic origin, as a rule.

Dr. Heitzmann remarked that most of those which he had seen occurred in connection with, or as sequelæ to scarlet fever; and Dr. Sherwell mentioned that within the past ten days he had known of two cases of gangrene of the mouth, one of which was of scarlatinal origin, while the other occurred in a strumous child without assignable cause.

The next paper in order was one by Dr. Sherwell on

THE USE OF LINSEED AND OIL AS THERAPEUTIC AGENTS IN DISEASES OF THE SKIN.

He had first called the attention of the profession to this subject, he said, in a paper read a few months previously before the New York Dermatological Society, a brief extract of which had appeared in the New York Medical Record of April 13, 1878. Hitherto the chief hydrocarbon in use had been cod-liver oil, but this positively disagreed with some individuals, and was open to many objections; so that he had been led to seek for some more assimilable and less objectionable one, and he believed that he had discovered it in flaxseed. He was in the habit of employing it in three forms.

1. If the patient was a male, and had sound teeth, he recommended the seed in its natural state, as he could carry a quantity of it in his pocket and eat it from time to time through the day. The ordinary domestic flaxseed is small, and of a dark color, and contains about twenty per cent. of oil; while the Bombay or Calcutta seed, which is by far the most desirable, is larger, lighter in color, and contains about thirty per cent. of oil. Its use in this manner was unattended by any disagreeable results.

2. In the case of women and children he preferred the seed ground into meal, and was in the habit of using it mixed with milk in the form of a porridge.

3. He sometimes employed the meal in the shape of bread, flour being added to the meal in any proportion desired. This had been suggested to him by Dr. Piffard, and he had found it of great service in cases where the linseed could not be taken in other forms, although he did not consider it quite so efficient as the simple seed, ground or whole. [A loaf of the bread, containing sixty per cent. of linseed meal, was here exhibited and partaken of by the members.]

When the seed was taken into the stomach in its ordinary state, a natural emulsification was performed within the system from the oil freed there, and he considered a recent oil much more active than one which had been exposed for some time to oxidation. He believed, from what he had seen of its action, that linseed had specific virtues in the dry and scaly diseases of the skin, such as pityriasis rubra, ichthyosis, and dry eczema, and that these were due to its peculiar effect in stimulating and correcting the sebaceous secretion, as well as its beneficial influence upon the system in general. Externally applied, linseed oil

was of marked service in lubricating the surface, and it had the great advantage over most other oils of not becoming rancid when mingled with degraded epithelium.

Dr. Sherwell gave the details of two cases of pityriasis rubra, one of pemphigus foliasis, and one of pemphigus vulgaris, all of great severity, which he had treated successfully with linseed and oil, and in some of which all other measures had failed. He also mentioned a number of cases of icthyosis and chronic eczema in which he had employed them with the most satisfactory results. The paper was discussed by Drs. Piffard, Van Harlingen, and White.

Dr. Atkinson now read a paper on

THE BOTANICAL RELATIONS OF TRICOPHYTON TONSURANS,

in which he gave the details of his experiments in cell-culture, after the method of Van Tieghen, and in connection with which he exhibited a number of drawings representing the microscopic appearances presented at different stages of the growth of the parasitic vegetation. It was discussed at some length by Dr. Heitzmann.

The last paper of the afternoon session was a very elaborate report of

A CASE OF ULCERATIVE SYPHILODERM,

by Dr. Van Harlingen. It occurred in a female patient in advanced life, and he considered it a very rare form of disease. It was of long standing, and commenced in a gradually increasing roughness of the skin of the legs, with the appearance of small gray patches. This was the only trouble about the skin for a number of years, and then itching commenced, and the gray patches extended over the body, and finally made their appearance on the face. There were also some ulcerations at times. When the patient came under Dr. Van Harlingen's notice, some time later, the entire surface of the body was affected, the color for the most part being a brownish red, except on the legs, where it was of an ashen gray. At many points there were deep, profusely suppurating ulcers, and about the right elbow was a singular group of hard, gray nodules. Almost everywhere else the skin was covered with fine scales, and in some places there were patches of dead white, which were found to be the cicatrices of former ulcerations. The ulcerations continued to increase in number and severity, in spite of all treatment, and the patient finally died of exhaustion. From the family history, and the condition of some of the internal organs, as shown by the autopsy, Dr. Van Harlingen was inclined to believe that the disease was of scrofulous origin. Under the microscope the horny and mucous layers of the skin seemed normal in character, but the papillary layer of the corium-cells were markedly infiltrated. The upper and middle layers were principally affected, and the lower ones to a much less extent. [Microscopical specimens presented.] The case was discussed by Drs. Atkinson, Duhring, and Piffard.

Third Day, Thursday, August 29th—Morning Session.

In consequence of the pressure of time, a paper describing

A CASE OF RECURRENT CUTANEOUS HEMORRHAGE, WITH URTICARIAL AND BULBOUS EFFLORESCENCE,

by the President, Dr. White, was read only by title, and Dr. Taylor then offered

A FURTHER CONTRIBUTION TO THE STUDY OF THE XERODERMA OF HEBRA.

During the past year, he said, he had had an unusual opportunity of studying the disease in the persons of three sisters, and he thought he would now be able to clear up a number of points which last year had seemed obscure. One important matter was that he had determined positively that the brown spots of pigmentation invariably appeared in the exact position of the red spots preceding them, and another was that these red spots consisted of a new formation of the papilla, and seemed to be the starting-point of the disease. The blood-vessel at first underwent enlargement, but afterwards became atrophied and disappeared. The brown spot was then left; its shape corresponding with the conformation of the vessel. The pigmentation might be explained either on the hypothesis that the hæmatoidin was exuded from the enlarged blood-vessel, or that the natural production of pigment in the part was exalted by the increased vascularity present. It would seem, then, that in the pathological history we had, *first*, the red spot; *second*, the brown spot, with pigment development and new cell-formation; and *third*, the new cells, together with the normal cells of the part, degenerating and leaving cicatricial tissue. All the vessels underwent hypertrophy and then atrophy; and when the atrophic process had once set in (if it were at all intense) there would be no further pigmentation; while if the atrophy were not marked, the pigmentation might go on indefinitely. In its later developments Dr. Taylor believed that the disease predisposed the patient to malignant growths about the face. In regard to a name for the affection, it was plain to see that it could not properly be called a xeroderma, and he proposed as a title, descriptive of its true character, the following—*angioma pigmentosum et atrophium.* [Microscopic specimens presented.]

A protracted and most interesting discussion, by Drs. Duhring, Piffard, Fox, Heitzmann, and Taylor, followed the reading of the paper; after which the Permanent Committee on Classification and Nomenclature made their annual report, through the President, Dr. White. After some opposition, the classification of Hebra, considerably simplified and modified, which was recommended by the committee, was adopted by the Association, whose members thereby bound themselves to make exclusive use of the same during the next twelve months.

At one of the private meetings of the Association the following officers were elected for the ensuing year: President, L. A. Duhring, of Philadelphia; Vice-Presidents, J. N. Hyde, of Chicago, and S. Sherwell, of Brooklyn; Secretary, R. W. Taylor, of New York; Treasurer, J. E. Atkinson, of Baltimore. The retirement of the old, and induction of the new president then took place, with a few appropriate remarks by each, and the Association adjourned to meet in New York on the last Tuesday of August, 1879.

The Yellow Fever Commission.—A meeting of the Medical Society of the County of New York is to be called, for the purpose of advising Congress to make an appropriation for a medical commission to inquire into the origin, the prevention, and the treatment of yellow fever, and also to suggest such legislation as may be needed to empower the general government to institute measures for its prevention and control.

Correspondence.

INTERNAL QUARANTINE FOR YELLOW FEVER.

To the Editor of The Medical Record.

Sir:—I have your letter requesting my "views regarding internal quarantine, and how it could be made effective in the way of preventing the spread of yellow fever."

I hope later to review more fully than is possible at this time the lessons of the present epidemic in respect of internal quarantine, which has been tried by nearly, if not quite all of the cities and towns which have suffered from the fever, as well as by a few cities which have so far escaped. The experience of the past, especially as exemplified in land quarantines against the spread of cholera, have not only proved ineffectual, but have in some instances added famine to pestilence. Where the inducement is great, the quarantine is sure to be broken, and in view of this fact I have taken the ground that absolute quarantine by land is impracticable. I do not in fact believe it necessary, but certainly in any effort to prevent the spread of yellow fever, it is more rational to adopt some plan which it is possible to execute.

The quarantines established, since the commencement of the present epidemic, by the various local authorities, have been directed especially against *persons* coming from infected places, and have been extreme and uncompromising; that is, they have declared that no one from an infected district shall be permitted to pass the quarantine until frost, or the first day of December. While so rigid an ordinance was declared against persons, infected vessels, like the steamboat *John D. Porter* and her barges, were permitted to ascend the Mississippi and Ohio rivers, a distance of 1,600 miles, almost without hindrance. The rivers are national high roads of commerce. The health authorities of the several States can, at most, only forbid the landing of infected vessels, and the laws of the United States forbid the Government health authority from interfering in such cases, which practically leaves an infected vessel as a law unto herself, to carry the poison of the silent destroyer unchecked, "with effect much like a firebrand amongst explosives."

The unsettled, indefinite opinions held in respect to *how* the yellow fever poison is spread from place to place appear to underlie the failure of internal quarantine.

Evidence warrants the assertion that yellow fever poison is transported by THINGS, *and not by* PERSONS *considered apart from their clothing.* As examples bearing upon this evidence, I may mention several cases which occurred during the present epidemic. A young woman, a resident of Cincinnati, was there attacked by the fever and died. Previous to her attack, baggage or goods brought from the infected city of New Orleans had been stored in the house where she lived. The children of the Porter family residing upon the bank of the Mississippi, about two miles from Cairo, found a skiff which had been used by refugees from the infected cities, and carried it to their home for repair. Three or four days afterward all of the children who were around the boat were stricken with the yellow fever in one day. At Gallipolis, Ohio, none have had the yellow fever but those who visited or came near the infected steamboat and her barges anchored in the river near that place, and there have been twenty-five cases and nine deaths up to the 13th inst. On the other hand, yellow fever patients have been treated, and in some instances are now under treatment, in the Marine Hospitals at St. Louis, Cairo, Louisville, and Cincinnati, without communicating the disease, the simple precaution having been taken to disinfect the clothing and other effects immediately upon receiving the patients. It is a well-known fact that the unacclimated attendants upon the yellow fever patients at the New York Quarantine do not contract the disease; this is also true of other quarantines. Dr. Vanderpoel disinfects the clothing by fire, so there shall be no mistake about its thoroughness.

Now, if the premises be true, the conclusion indicates a simplified quarantine, not of *persons*, but of *things*—the clothing upon the person, baggage in boxes, trunks, valises, or hand bags. The disinfection should be effectuated just outside an infected city, at the commencement rather than at the end of a journey. When the yellow fever breaks out among the resident population of a city or town, all unacclimated persons should be prohibited from entering the infected place, and the unacclimated residents should be removed to temporary camps on the highest available ground, at least two miles outside of the infected locality. But there should be established an intermediate station where the clothing and other effects of the fleeing people shall be thoroughly disinfected before they are permitted to enter the camp. Such a simplified internal quarantine, as here indicated, might be carried out if a central office or head were clothed with authority, but in my opinion the millennium will have come when the authorities of all of the cities and towns of the several States think and act alike in this matter. Checking the spread of transportable and preventable disease is one of the contingencies that our forefathers appear not to have taken into account when they established our *e pluribus unum* form of government.

Very respectfully yours,

John M. Woodworth,
Surgeon-General United States Marine Hospital Service.

Washington City, *Sept.* 16, 1878.

ON THE ORIGIN AND CONVEYANCE OF YELLOW FEVER.

To the Editor of The Medical Record.

Sir:—It is well known that this fever is indigenous in Havana, Vera Cruz, Matanzas, Sagua la Grande, St. Thomas, St. Domingo, &c., and may be said to be permanently present there. It is only occasionally present in the United States, and I believe must be imported and cultivated there to gain a good foothold, although the climatic and social peculiarities of New Orleans, Memphis, Vicksburg, and other towns often seem to invite it. It arises from a distinct and specific poison, which frost kills, and hence the inference seems almost irresistible that it must be re-imported into all places where it has once been destroyed.

It seems admitted that the poison of yellow fever, like that of typhoid fever and Asiatic cholera, cannot be conveyed directly from the sick to the healthy; but the perspirations, hemorrhages, vomits, urine, and other discharges undergo changes outside of the body which reproduce the disease, which then arises as a miasm, or malaria, from the unwashed, and undisinfected bed and body clothes, from the wash and chamber utensils, and from the yards, drains, privies, gutters, &c., into which these foul substances have been thrown. The principal indication for the pre

vention of yellow fever is absolute personal cleanliness of the sick, their families, the nurses, doctors, and all who are in attendance. Every nook and cranny of the sick-room, and every article in it should be kept absolutely clean and disinfected. After that, yards, streets, gutters, drains, privies, &c., and every mass of filth, private and civic, should be attended to.

JOHN C. PETERS.

HOW TO MAKE A GOOD PLASTER-OF-PARIS BANDAGE.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR:—I desire to make known to the profession, through your journal, the result of my experience with a new variety of cloth for the plaster-of-Paris bandage, and a new way of cutting the same. It is superior to the thin muslin or crinoline, and is known in the trade by the name of "cheese cloth." Its meshes are finer than that of the crinoline; and as no starch or dressing is used in its manufacture, the fuzz of the thread in the mesh is sufficient to retain the dry plaster without loosing the same. To prepare the same in rollers, the most convenient way is to take a whole piece (sixty yards in length) in which the end tags have not been removed, to any book-binders or printers who have a large *lever paper-cutter*, and get the same cut into strips of the proper width for rollers. Ten minutes' time will suffice for this, at an expense of about twenty-five cents. The strips are then ready to be cut off into the required length for rollers, and as the cloth is folded in yard folds this is an easy matter. The sixty yards will make over a hundred five-yard rollers, and not the slightest drawing of the thread will be observed.

DANIEL S. BURR.

BINGHAMTON, N.Y., Aug. 22, 1878.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 8th to September 14, 1878.

VICKERY, R. S., Capt. and Asst. Surgeon. Assigned to duty as Post Surgeon at Plattsburg Barracks, N. Y. S. O. 164, Dept. of the East, Sept. 11, 1878.

LA GARDE, L. A., 1st Lieut. and Asst. Surgeon. Assigned to duty at Fort Columbus, N. Y. H. S. O. 160, Dept. of the East, Sept. 6, 1878.

OPERATION FOR PHYMOSIS BY THE ELASTIC LIGATURE.—At a recent meeting of the *Société de Chirurgie* in Paris, Dr. Hue, of Rouen, read a paper on a modification introduced by himself in the operation for phymosis. Instead of dividing the prepuce with a cutting instrument, he merely passes a needle through its dorsal surface close to the base of the gland, and ties the portion of skin in front of the puncture with an elastic ligature. The ligature cuts its way through in three or four days. The process is not painful, and the patients can, if necessary, continue their usual avocations. Dr. Hue has employed this process with success in eighty cases, which comprised both old men and children. He asserts that the result is very satisfactory from an æsthetic point of view; the gland remains half uncovered and retains its natural decoration unmarred by a scar.—*Le Progrès Médical*, No. 19.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.—Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 14, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Sept. 7, 1878.	1	19	27	3	2	37	0	0
Sept. 14, 1878.	0	18	34	1	1	16	0	0

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE. WASHINGTON, D. C., August 31, 1878.

NATIONAL QUARANTINE REPORT.—Abstract of sanitary reports received during past week under the National Quarantine Act:

Memphis.—During the week ended six o'clock, September 12th, there were 687 deaths from yellow fever. It is impossible for the Memphis authorities to ascertain the number of cases.

Brownsville, Tenn.—The first case of probable yellow fever occurred on the 29th of August, resulting in death September 2d, since which time there have been 9 deaths from yellow fever. There were 30 cases under treatment last evening. At least two-thirds of the population fled the city between the 1st and 4th insts.

Holly Springs.—116 new cases of yellow fever and 42 deaths occurred during the week ended yesterday evening, making in all 216 cases and 67 deaths. All of the resident physicians are sick.

Canton, Miss.—150 new cases of yellow fever and 20 deaths for the week ended yesterday evening. First case August 1st. Total cases, 340; total deaths, 50.

Port Gibson, Miss.—Dr. Wharton, of Mississippi State Health Board, reports about 500 cases of yellow fever and 94 deaths to yesterday noon, and "very few subjects left to take it."

Water Valley, Miss.—One citizen taken with yellow fever September 1st and died on the 7th. No other cases to yesterday evening since the refugee cases reported in August.

Ocean Springs, Miss.—16 cases of yellow fever and 4 deaths occurred during the week ended yesterday evening, making 34 cases and 9 deaths in all since commencement, August 30th.

Pass Christian, Miss.—From August 29th to September 9th there were 15 cases of yellow fever and one death.

Bay St. Louis, Miss.—6 cases of yellow fever developed in Bay St. Louis during the last week. 2 deaths. No new cases yesterday.

Pascagoula, Miss.—One of the cases previously reported, since died. No new cases.

New Orleans.—During the week ended yesterday noon there were 1,528 cases of yellow fever and 530 deaths, making in all, 6,137 cases and 1,925 deaths. In the last twenty-four hours, to Friday noon, there were 228 cases and 58 deaths.

Plaquemine, La.—175 cases of yellow fever and 37 deaths had occurred up to Sept. 8th.

Morgan City, La.—There have been 25 cases of yellow fever and 8 deaths, of which 3 cases and 2 deaths occurred during past week.

Port Eads, La.—No cases and no deaths from yellow fever during last week. There were 21 cases and 2 deaths from Aug. 16th to 31st—period not previously reported—making in all 67 cases and 8 deaths.

Mobile.—One death from yellow fever occurred on the 9th inst.

No other cases to last evening. City healthy.

St. Louis.—During the week there were 2 cases, of local origin, said by some to be yellow fever, disputed by others; one died, the other was sent to Quarantine hospital, where 9 refugees died of yellow fever during the same period.

Cairo.—The editor of the *Cairo Bulletin* died of yellow fever on the 12th inst.; one employé of the *Bulletin* office died yesterday. No other cases. On the 4th inst. 4 members of a family residing two miles from Cairo, upon the bank of the Mississippi, were suddenly stricken with yellow fever. On the 10th the remaining two members of the family were attacked; one died. The children found an abandoned skiff in the river, and removed it to the house for repair. Three or four days afterwards all who were around the boat were stricken with fever in one day. The Quarantine physician dissents from the diagnosis of the attending and consulting physicians.

Hickman, Ky.—The telegraph operator reported dead. No other information obtained.

Louisville.—There were 19 new cases of yellow fever and 7 deaths for the week ended yesterday evening—all refugees.

Cincinnati.—From Sept. 4th to yesterday evening there were 7 cases of yellow fever and 4 deaths. All of whom were recently from infected places South.

Gallipolis, Ohio.—There have been 25 cases of yellow fever and 9 deaths, resulting from communication with the steamboat "John D. Porter" and her barges while anchored near Gallipolis.

This vessel and her infected barges ascended the Mississippi and Ohio rivers from New Orleans to Gallipolis with effect much like a firebrand among explosives. The local health authorities could only prevent her landing, and the law forbids this office interfering in such cases.

Key West.—One case of yellow fever and one death during the past week.

Kingston, Jamaica, Sept. 3d.—A few cases of yellow fever have occurred at Port Royal, six miles from Kingston; one proved fatal.

The steamship "Etna," from Hayti, arrived at Kingston on the 1st inst. with the purser sick of yellow fever contracted in Hayti.

Calcutta.—There were 11 deaths from cholera and 20 from small-pox during the week ended July 13th.

Bombay.—22 deaths from cholera and 9 from small-pox. week ended July 23d.

Havana.—51 deaths from yellow fever and 5 from small-pox during the week ended Sept. 7th.

During the week ended Aug. 24th. there were 24 deaths from scarlet fever in *Birmingham*, England, and the same number in *Liverpool* and *London*. In *Hamburg* there were 31 deaths from typhus fever, 11 from enteric fever, and 20 from diphtheria in the same week.

In *Alexandria*, Egypt, the annual rate of mortality per 1,000 of the population, based on the weekly mortality for the week ended Aug. 8th, was 58.8.

No official reports could be obtained from Vicksburg, Grenada, Baton Rouge, Bolton, etc.

Reports from other places indicate good health.—JNO. M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

CLUB-FOOT CURED BY AN ACCIDENT.—The following case is of interest, as illustrating the value of manipulations and methodical exercise in the treatment of club-foot. The patient was born with a very marked, double equino-varus, and grew up to the age of four years with this deformity, walking in the manner peculiar to it. One day a nail, which was lying loose on the floor, ran into the left foot at the very part which came in contact with the ground in walking, and the child, in consequence, was unable to bear his weight on the foot. As, however, he was very active and impatient of repose, he tried hard to bring the toe of the foot in contact with the ground, and finally succeeded in doing so, and was thus enabled to walk again. The wound healed and the deformity gradually disappeared almost completely. The child was then induced by promises to make the same efforts with the right foot, and his success was in time equally marked. At the present time he is eleven years of age, and the only relics of his former deformity are a slightly abnormal shortness of the feet, and a slight contracture of the right tendo Achillis.—*The Lancet.*

A CASE OF THIRD DENTITION.—This case is reported in the *British Med. and Surg. Jour.* The subject had his four upper incisors extracted on account of neuralgic pains, when he was 47 years of age. Ten years afterwards the two upper teeth on the left side reappeared; they were smooth, thin, and transparent, and soon became loose. Two years later they were pushed out with the finger without difficulty.

AID FOR PHYSICIANS AND THEIR FAMILIES WHO HAVE SUFFERED OR WILL SUFFER FROM THE EPIDEMIC OF YELLOW FEVER.—The Medical Society of the County of New York, through its president and treasurer, has thus far received sixteen hundred dollars in contributions. The President, Dr. J. C. Peters, 83 Madison Ave., N. Y., has opened a special bank account for the purpose, and subscriptions from medical societies or individuals can be forwarded to him directly.

YELLOW FEVER IN MEMPHIS.—A private letter from Memphis states that one hundred more physicians are needed to care for the sick. In some of the hotels the new comers are placed in rooms from which the dead from the fever have been removed, and while the remains of the black vomit are seen upon the floor. Under such circumstances is it a wonder that the disease spreads?

THE ROLL OF HONOR.—The following are the additional deaths of physicians from yellow fever:

Grenada, Miss.—Sept. 9th, Dr. R. S. Ringgold, President Board of Health. Sept. 13th, Dr. George W. Woolfolk, volunteer from Paducah, Ky.

Memphis, Tenn.—Sept. 9th, Dr. McKim, volunteer from St. Louis. Sept. 10th, William C. Cone, volunteer from Franklin, Tenn. Sept. 13th, Dr. B. W. Avent. Sept. 14th, Dr. Nugent, volunteer from St. Louis, and Dr. Harlan, volunteer from Hot Springs, Ala. Sept. 15th, Dr. McGregor, volunteer from Tipton Co., Tenn. Sept. 16th, Dr. T. L. Bond, volunteer from Brownsville, Tenn., Dr. Menees, volunteer from Nashville, Tenn., and Dr. J. R. Reimer, volunteer from Indianapolis, Ind.

New Orleans, La.—Sept. 9th, Dr. Charles Gallagher. Sept. 12th, Dr. Isidore Lehman. Sept. 13th, Dr. C. L. C. Herndon.

Vicksburg, Miss.—Sept. 12th, Dr. Norris, volunteer from Chattanooga, Tenn. Sept. 13th, Dr. Blichfieldt, volunteer from Chattanooga, Tenn., Dr. Potts, volunteer from La., and Dr. Sappington.

Hickman, Ky.—Sept. 13th, Dr. Blanton. Sept. 14th, Dr. Barnes. Sept. 16th, Dr. Cattell.

Original Communications.

ON "LITHOTRITY BY A SINGLE OPERATION," WITH CASES.

By W. H. VAN BUREN, M.D.,

PROFESSOR OF SURGERY, BELLEVUE HOSPITAL MEDICAL COLLEGE.

THERE has been a recognizable tendency of late years, since the operation of lithotrity has been generally adopted by surgeons, to diminish the number of sittings, and to avoid cases likely to require frequent repetition of the crushings. In the discussion at the Royal Medico-chirurgical Society of London, in March last, on Sir H. Thompson's remarkable paper presenting an analysis of 500 cases of stone in the male adult, the great specialist himself avowed that in his last hundred cases he had been drawing the line more closely, and reverting in a somewhat larger proportion of cases to lithotomy.* In fact, the general tone of the discussion was not very favorable to lithotrity. Sir James Paget felt justified in regarding the operation as hardly susceptible of further improvement, and yet its results were often incomplete and unsatisfactory, and he concluded that, for his own part, were he to recommence an active surgical life, "he would begin with lithotomy, and reserve for lithotrity only those few cases in which the calculus could be got rid of in two or three sittings." Sir Henry, in his final summing up, pleads for extending the line a little farther, to include cases "where the stone might be crushed at three, or, at most, four sittings," beyond which point "he should mostly prefer to cut."

The strongest points made against lithotrity were: *cystitis*, "due to the injury done to the mucous membrane by sharp fragments of stone and by continued instrumentation;" the *atony* liable to be developed by it in old people, with a continuation of vesical irritability and phosphatic deposit; and the *liability* to *overlook minute fragments*, and the consequent unsatisfactory results.

These objections all practical lithotritists will recognize as valid; but do they justify recurrence to lithotomy as their only remedy? Cannot lithotrity be rendered less imperfect?

With sincere respect for the eminent authorities just named, I venture to question their conclusions on these points as possibly premature, for there is reason to believe that a discovery has been made by an American surgeon which may take away from lithotrity its chiefest objection, and it may prove that, as an operation, it *is* yet susceptible of improvement. The evidence adduced by Prof. Bigelow, of Harvard,† goes so far towards the demonstration of "a tolerance by the bladder of protracted manipulation which has not been hitherto recognized," that we must at least suspend judgment until this evidence is either confirmed or disproved, after a fair trial.

Personally, I feel much confidence that Prof. Bigelow's novel proposition, that lithrotrity may be safely accomplished at one sitting, will be successfully demonstrated, and that his discovery of the hitherto unrecognized tolerance of the bladder—for it is certainly to be regarded as a discovery, in the full sense of the term—will, by its great practical value, modify the future of lithotrity.

As a contribution towards a final judgment on this interesting question, I append some cases, which, although less serious in character than those of Drs. Bigelow and Curtis, may, nevertheless, serve as evidence.

In the year 1865 I had the privilege of witnessing a private operation by Sir Henry Thompson, upon a gentleman with a small stone and a very irritable bladder, in whose case it was thought best to employ anæsthesia and take measures to rid the bladder entirely of calculous matter at one sitting. The stone was rapidly reduced to small fragments, an evacuating catheter after a model devised by Nélaton introduced, and an india-rubber bulb somewhat larger than that of a Davidson's injecting apparatus attached to the catheter, with an intervening glass capsule to receive and retain the fragments. The tepid water in the bulb was then forced into the bladder, and as it was sucked out the calculous fragments collected rapidly in the glass bulb. The operation, which occupied over half an hour, was successful. Mr. Clover, who administered the chloroform, was credited with the contrivance for evacuation. I learned from Sir Henry that he considered this mode of operating risky, and only justifiable in exceptional cases, as an alternative for lithotomy.

I afterwards found, in Paris, an evacuating-pump of metal, and glass bottle, bearing Nélaton's name, but could get no satisfactory evidence that it had been successfully employed.

In March, 1876, I felt justified in attempting to empty the bladder of a calculous patient at one operation—a lady of sixty-six, partially hemiplegic and exceedingly hyperæsthetic, whose sufferings were constant and excessive. Her heart was also weak and dilated, but the ether was, nevertheless, borne well. The stone was phosphatic, and not large. The operation, which was not timed, lasted more than half an hour. The evacuating apparatus was by no means efficient. The urethral orifice was nicked on either side and the finger introduced for exploration, pressure upon the hypogastrium and from the section being employed to bring all parts of the surface of the bladder, as far as possible, in contact with it. The fragments were thoroughly removed, and the operation was followed by no vesical reaction, and by no bad symptoms. A week later there was temporary suppression of urine, and a mild convulsion, which passed off quietly. The patient died six months later, exhausted by the midsummer heats, having experienced much relief from the operation on her bladder.

I have, in several instances, greatly exceeded the conventional limit of five minutes for a lithotrity crushing, and never had cause to regret the infringement of the law, the propriety of which I considered, nevertheless, as based upon too much experience and too high authority to be questioned. In fact, I had taught it myself for years, and regarded its transgression as a risk of doubtful propriety; but the perusal of Prof. Bigelow's paper at once recalled incidents in past experience which accorded with his statements, and so far confirmed the reasonableness of his novel practice, as to determine Dr. Keyes and myself to test it in the following case, which was at that time in our hands:

Mr. I. L., 60, an over-sensitive and timorous person, a sufferer from bleeding piles since early life, has had for ten years occasional irritability with difficulty in emptying his bladder, which led him to habitually use a catheter. Within two months his

* London Lancet, March 16, 1878, p. 386.

† "Lithotrity by a Single Operation," by Henry I. Bigelow, M.D., Professor of Surgery in Harvard University, and Surgeon to the Massachusetts General Hospital.—Amer. Jour. Med. Sci., Jan., 1878, p. 117.

pain has increased, the urine showing a considerable deposit, for which he came to the city for advice in January last. I found some atony of the bladder, and a soft stone of moderate size, and lithotrity was commenced in the usual way. The first crushing, however, was more painful than he had anticipated; he voided very few fragments, and became demoralized, and his bladder symptoms also were aggravated. Under precisely similar circumstances I have been compelled to resort to lithotomy, but now decided to try rapid evacuation. On the 29th he was etherized, his stone reduced to small fragments, and, as far as we could judge, the bladder was entirely cleared. Time, about half an hour; quantity of calculous matter obtained not weighed. There was no reaction whatever on the part of the bladder, and the relief that followed was so prompt and decided that Mr. L. went home within ten days, with instructions to wash out his bladder daily with the "fountain-syringe," and return in a month for a final examination. For this operation neither Bigelow's lithotrite nor evacuating catheter could be had; only his new washing-bottle was used, with one of Nélaton's evacuating-tubes, and a lithotrite, which became impacted. When Mr. L. returned in March, fragments could still be detected by the searcher, and some had passed. He was again etherized, the fragments caught and crushed, and the bladder thoroughly washed out, this time with the new evacuating-catheter. Time, twenty-five minutes. No reaction whatever on the part of the bladder. In a week he returned home, considering himself well. I saw this gentleman again in July as he passed through the city; he was in improved health, free from vesical pain or irritability, washing out his bladder daily with the fountain-syringe. The latter precaution was required by the persisting atony, which, as far as I could judge, had not been aggravated by the prolonged sittings. His urine had nearly regained its normal appearance.

G. P., aged 63, merchant, a spare, gouty, nervous person, was brought to me by Dr. Ceccarini, March 19, 1878, complaining of great vesical irritability, which had been gradually increasing for four months. I found two smallish, hard, movable stones, a rigid urethra, a somewhat enlarged prostate, and moderately clear urine. On the 25th Mr. P. was etherized, and 123 grains of uric acid calculus obtained, by means of the new pumping-bottle, in about an hour. There was no inflammatory reaction on the part of the bladder, and the temperature did not exceed 101° until the third day, when it suddenly went up to 105°, coincidently with a severe chill, which was followed by profuse sweating and some mental cloudiness. There was no recurrence of the chill; complete inability to pass water followed the operation, and it was regularly drawn, and the bladder washed out with a weak quinine solution. This remedy was also given freely internally, together with acetate and citrate of potass. The atony gradually passed off, and, by the end of the second week, Mr. P. was able to void his urine without pain, at normal intervals, and it was quite clear. Within the month he was entirely well, and has remained so, suffering only a little from a slightly enlarged prostate, and so much of atony only as prevented him from voiding the last drachm of residual urine. We had not yet been able to obtain the Bigelow evacuating-tubes, nor one of the lithotrites in working order. The instruments used for this case were: the Nélaton tube, the new washing-bottle, and one of our ordinary lithotrites of the Weiss-Thompson pattern, which Dr. Keyes had succeeded in having so modified in the blades that it worked absolutely without impaction.* This he used in this case, at my request, and the entire freedom from clogging, after a half-hour's steady work, and the uniform size of the hard uric acid fragments subsequently brought away, was exceedingly satisfactory.

I attribute the chill on the third day, in this case, to mechanical irritation of the rigid urethra by the frequent introduction of the catheter, which was rendered necessary by the atony. There was no increase of pus in the urine, nor hypogastric pain, nor other evidence of cystitis.

J. H. B., aged 46, married, perfectly healthy before his present illness, was brought to me by Dr. Messenger, in July, 1878, with a history of a sudden stoppage of his urine in April last, which had continued unrelieved for five days, and caused intense suffering. Since this he has had constant uneasiness and great pain and difficulty in passing water, which shows a copious deposit of pus and ropy mucus. I found a general and somewhat acute cystitis, some atony—which had rendered him unable to completely empty his bladder without the catheter—and a small movable stone. Riding gave him intense pain, there was tenderness on hypogastric pressure, and his paroxysms of tenesmus were frequent and severe. Recognizing that the cystitis had been caused by the prolonged retention, and that the presence of the calculus was perpetuating it; and, also, that the atony, an obvious result of the over-distention, could only be remedied by restoring the bladder to a natural condition, I decided to remove the stone by rapid lithotrity, after a few days' preparation. Accordingly, on the 23d of July, it was reduced to fragments, under ether, and pumped out, in twenty-five minutes. There was a distinct dark nucleus of uric acid from the kidney (which, by plugging the prostatic urethra, had caused the retention in April), and an external crust of phosphates, which had since been deposited upon this nucleus in the bladder. Under systematic washing out with quinine solution, there was steady improvement from the time of the operation, without an unfavorable symptom. As soon as he had learned to wash out his own bladder, Mr. B. left for the country entirely free from pain, and with a noticeable improvement already in his urine.

W. O. J., merchant, married, a stout person, weighing 230 lbs., was sent me in July, 1878, by Drs. Johnson and Clark, of Oswego county, N. Y. He urinated about every hour by day, and every two hours at night, with great pain and vesical tenesmus, and his urine, which is faintly acid, is loaded with pus and stringy deposit tinged with blood. It is nearly three years since he first began to pass gravel. I found a hard, movable stone, measuring in the lithotrite, in one of its diameters, seven-eighths of an inch. On account of an abnormal double sound of the heart, the exact significance of which was the subject of a difference of opinion, the ether was administered with great caution; but the stone, which was very hard, was thoroughly crushed and washed out, the operation lasting fifty minutes. Prompt relief to the tenesmus and the frequent calls followed the operation, and Mr. J. was able to pass his water without difficulty at steadily increasing intervals. The bladder was washed out daily, and the patient taught to perform this office for himself. He left for home, with his wife, on the tenth day.

On the 21st of August Mr. J. returned to the city for a final examination. His urine had lost its depos-

* For a description of this modification, with woodcut, see MEDICAL RECORD, May 18, 1878, p. 388.

it, and was nearly normal; so also were the intervals between his calls, and he had no pains and no atony. Nothing was found in the bladder after careful search.

This patient, who thought he got some relief by occasionally introducing a catheter, which he had been taught to do by a quack, in order to inject a minute quantity of some wonderful panacea, hurt himself slightly with his instrument on the 19th of July, four days previous to the operation, and the accident was followed by a violent chill, succeeded by fever and sweating. After the crushing he had quinine and morphine, and no rise of temperature whatever was observed.

In this, as well as in the preceding case, both of which were operated upon on the same day, all the Bigelow instruments were used, except the lithotrite, which was substituted by Dr. Keyes' modified Weiss instrument, the working of which has thus far proved entirely satisfactory. The curved evacuating-tubes worked admirably. In the last case it was necessary to incise the meatus freely in order to receive the largest size. As their inventor suggests, care is required in managing the curved beak in the bladder, and the dimple in the bottle must be watched to detect obstruction promptly; but when the tube is rightly placed, the rapidity with which the fragments pour into the glass bulb is exceedingly satisfactory.

I record the next case only because it illustrates the value of the new evacuating apparatus in aiding diagnosis as to the presence of fragments in a pouched or trabeculated bladder, where the searcher or lithotrite cannot reach them.

C. M. H., aged 56, manufacturer, was brought to me in June, 1878, by his physician, Dr. J. O. Curtis, of Hartford, Connecticut, for frequent calls to void urine, and great pain in the act, the urine being offensive, and depositing pus and blood. Whilst in his usual health, two months before, he had been taken with retention of urine on a journey by rail, and he was not relieved until after several days of severe suffering. When first seen by Dr. C., he had all the symptoms of active inflammation of the bladder, and had been passing some white gravel. I found some enlargement of the prostate, and discovered a soft stone of moderate size in the bladder—which gave evidence of excessive sensitiveness, and also of thickening of its walls. As there was habitual retention of more or less putrid residual urine, which was evidently keeping up the acute purulent cystitis at the neck, and precipitating the phosphatic salts, I advised that the bladder should be systematically emptied and washed by means of the fountain-syringe and soft catheter, beginning very gently and gradually. He went home to carry out this course for a month, two daily washings being accomplished after the first week, and at the end of this time a report was received of decided improvement in the condition of the urine and of the bladder, and of the passage of several round white stones the size of a pea, with some rougher fragments. On his second visit to the city, in August, I found the bladder much more tolerant, but evidently trabeculated, and neither Dr. Keyes nor I could find any calculous matter with the searcher. But, as the characteristic pain and irritability were still present, I advised a search and thorough washing under ether, which was done on the 7th. Nothing could be found by the lithotrite, and the thickened edges of the bladder folds under moderate distention were very manifest. On the first application of the evacuating-tube and washing-bottle, however, there came quite a discharge of small, round, pea-like masses and rough sand. Subsequently a small fragment was caught by a duck-bill lithotrite, and thorough washing repeated. The manipulation continued nearly forty minutes. There was no reaction; longer intervals and diminished sensibility followed at once. He had had some chills recently, under provocation of unusual irritation; but none followed the washing under ether, and Mr. H. returned home within the week, much gratified with his improvement.

In this case, the agglomerate of small phosphatic masses, rounded by the action of the bladder and cemented together by mucoid sediment and recently precipitated sand, which formed the stone I felt in June, had evidently become disintegrated under the systematic washing, and possibly the whole might have been brought away by this milder process. But the efficiency of the new evacuating apparatus, as well as its value in facilitating diagnosis, and the singular tolerance of the altered and recently acutely inflamed bladder under manipulation, were all very noticeable.

C. L. C., aged 58, merchant, married, was sent to me on the 27th of August, 1878, by Dr. M. R. Vedder, with urgent pain in the bladder and too frequent calls, which had come on eighteen months before, after a long ride and wetting, and, with occasional attacks of increased irritability, had continued ever since. The patient, who is ruddy and well nourished, has pain in urinating, and tenesmus after the act, and to avoid the latter has acquired the habit of milking himself. His urine is very slightly turbid, and deposits a little pus and blood. On introducing the searcher, I encountered a small stone, or a fragment, in the prostatic urethra, just behind the hole in the triangular ligament, and at this point the sensibility was extreme. With the finger in recto I recognized that the prostate was not large, and by lifting the beak of the searcher, was able to pass it over the calculous mass into the bladder, where I felt at least one more small stone. The examination was followed by a sharp attack of increased pain. After this subsided, an appointment was made for an operation on the 9th of September, at which I had in view a median operation, unless the calculus in the prostatic sinus could be pushed back into the bladder. Happily, under ether, this was accomplished, the lithotrite passed readily, and the calculi were well crushed. By slight incision of the meatus, the largest evacuating-tube was admitted, the washing-bottle adapted to it, and the fragments, which were uric acid, all brought away, the whole proceeding lasting about forty-five minutes.

There was no subsequent trouble. The urine has been voided without any of the old pain ever since the operation, and at increasing intervals. It is now retained three and a half to four hours.

If the safety of Prof. Bigelow's proposition as regards rapid lithotrity be finally demonstrated by adequate proof of the tolerance of the bladder, certain corollaries will necessarily follow: 1. That the cystitis which so often occurs after first crushings—regarded by Thompson and Cadge, in the discussion already quoted, as one of the "serious defects" of lithotrity—is due to the increased mechanical irritation of sharp fragments, and *not to "continued instrumentation."* 2. That the more thorough evacuation of the bladder attainable by the Bigelow method lessens materially the danger of leaving undiscovered fragments after lithotrity.

It remains to be seen whether the protracted manipulations of "lithotrity by a single operation" are more likely to cause *atony* than the shorter and more frequent sittings of ordinary lithotrity; and whether this disability will not be sooner removed by the

prompt restoration to health likely to follow evacuation of the bladder at one sitting. It may become evident on further experience that atony, like cystitis, is caused and kept up by the presence of irritating fragments in the bladder, rather than by repeated or even prolonged instrumentation.

I have found that the use of cooler water in the daily washing of the bladder by means of the fountain-syringe, and the gentle and effectual fomentation of the surface of the irritated organ thus accomplished, is the best local remedy for atony; and I believe strongly that the regular use of tepid water, in this way, for a time, after lithotrity, by lessening pus-formation and consequent phosphatic precipitation, will diminish the tendency to recurrence, or perpetuation, of calculous disease. In fact, the thorough washing which constitutes so prominent a feature in rapid lithotrity has seemed to me to have a large share in securing for this proceeding the remarkable degree of tolerance of its manipulation which the bladder exhibits.

It may be within the knowledge of the reader that I have advocated for some years fomentation of the interior of the bladder by tepid or medicated waters —a proceeding greatly facilitated by the improved apparatus contrived by Dr. Keyes *—as the most efficient remedy in many of its morbid conditions; and it is proper to add here that my confidence in this remedy has been strengthened by recent experience.

210 Madison Avenue, Sept. 17, 1878.

THE TREATMENT OF SOME FORMS OF DYSPEPSIA (CHRONIC CATARRH OF THE STOMACH).

PART II.

By WM. B. NEFTEL, M.D.,

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In answer to inquiries, especially regarding the dietetic management of dyspepsia, I write this continuation to my first article.

The principal rule, as mentioned before, is not to allow dyspeptics to limit their diet to a few articles taken in insufficient quantity, because this always leads to general anæmia and emaciation, with their dangerous consequences (brown atrophy or fatty degeneration of the heart, pernicious progressive anæmia, marastic thrombosis, etc.). On the contrary, all our efforts must be directed toward correcting the abnormal condition of the stomach, removing the distressing symptoms by the remedies spoken of in my first article, and thus enabling the patients to partake of a variety of wholesome food in the required quantity. Some think that only farinaceous substances ought to be allowed to dyspeptics, while others, on the contrary, exclusively recommend animal food, especially meat, or at least the juice of meat, beef-tea, and soups. In my opinion both kinds of food are useful and necessary. I find, however, that soups, beef-tea, and meat-juice cannot entirely replace meat in substance; they contain only the aqueous extract of meat, and leave some of its most important constituents (earthy phosphates and albumen) in the residuum. Moreover, soups and beef-tea do not agree with all dyspeptics. The extract of meat is but concentrated bouillon or beef-tea, and contains, besides extractive substances (creatine, etc.), the salts of potash and phosphoric acid, which, although indispensable to the animal economy, are not sufficient alone for the nutrition of the system, and cannot be substituted for meat—the most nutritious and easily digested substance.

But how should meat be given to dyspeptics—raw, rare, or well cooked? The prevailing popular opinion, often shared even by the profession, is that the rarer the meat the easier it is digested. Sick persons, therefore, and especially when affected with diseases of the digestive organs, are given very rare meat, raw beef being considered the most appropriate for their weak digestion. However, experiments with artificial gastric juice, which I have repeated many times with the same result, prove that well-done meat is at least as easily digested as rare or raw meat, and even better. On the other hand, observations made on a large scale in the Infant Asylum of St. Petersburg * have elucidated the fact that raw or rare meat, which was formerly used in that institution, especially for those affected with scrofula, rickets, chronic diarrhœa, etc., is the most frequent cause of tapeworms. Since then these observations have been verified in many other places, and have proved that the eating of raw or rare meat is the source of development of animal parasites. Very probably the disposition to such a development is greater in persons with a morbid condition of the alimentary canal. In cases of dyspepsia, the additional symptoms arising from the parasites may become the cause of diagnostic errors. Thus, I treated a lady suffering from chronic gastric catarrh who manifested strange and obscure symptoms. Of a good constitution, and mother of several healthy children, her symptoms would not yield to the ordinary treatment of dyspepsia, and were ascribed to a uterine trouble—a slight retroversion and enlargement of the uterus. She was subjected to a special local treatment, and though the condition of the uterus was very much improved by it, nevertheless her general health continued to be unsatisfactory. Besides dyspepsia, she complained of various distressing but obscure symptoms, so that her affection was considered more mental than physical, and she was treated as suffering from hysteria and incipient insanity. At last, the presence of a tapeworm was discovered, after the removal of which the gastric catarrh became more manageable, and the patient recovered. In this case, to the distressing symptoms of the gastric catarrh were superadded the obscure symptoms produced by the tapeworm, developed undoubtedly from the raw meat methodically given to the patient in order to cure the gastric catarrh.

Raw pork is by far the most dangerous of all meats, the hog being pre-eminently the bearer of the most destructive animal parasites (cysticerci, echinococcus, tæniæ, trichina spiralis, distomum hepaticum, paramœcium coli, etc.), which may invade the interior of the eye, the brain, and other organs of the consumer, thus causing incurable diseases and death.

When working in Virchow's Pathological Institute, at the time he was making researches on the trichina spiralis, I had vast opportunities of examining trichinæ in animals and men, and was amazed at the mischief wrought by trichinous pork, often even unsuspected during the life of patients. The acute symptoms were usually ascribed to typhoid fever or other infectious diseases, and even at the post-mortem the real cause of death would remain unrevealed, if the muscles were not subjected to a careful microscopical examination.

The following case, from my own practice, illus-

* The "Injection of the Bladder." Am. Journ. of Medical Sciences, April, 1875.

* Weissé: Journal für Kinderkrankheiten, 1851, p. 384.

trates the danger of eating raw pork, it being the cause of development of cysticercus of the brain:

Mr. C., forty three years old, very robust, of an excellent constitution, and without any hereditary morbid disposition, but completely blind, and suffering from frequent epileptic fits and headaches, consulted me in June, 1874. Some years previous he went to California, where he engaged in mining, and afterward in the cattle trade. He worked very hard, often exposed to inclement weather, and had to live sometimes entirely on raw pork. Nevertheless, he continued in perfect health until suddenly attacked with a severe epileptic fit. Such attacks first appeared at long intervals, gradually returning oftener; his vision became dim, and finally was completely lost. He was examined by several oculists, who found the internal structures of the eye normal, and so also were the other organs of the body. He had been under the care of most distinguished neuropathologists, and the diagnosis was an organic cerebral affection, probably a tumor, but no exact definition of the disease was given. I had no opportunity of observing the patient to the final termination of the disease, but I am convinced that his affection was caused by the existence of cysticerci in the brain. Formerly it was impossible to diagnosticate during life cysticerci of the brain, unless the cerebral symptoms were accompanied by cysticerci in the eye or under the skin. Even Cruveilhier, in his *Anatomie Pathologique*, says: "Je ne connais rien de positif à cet égard," and only recently Griesinger * pointed out the group of symptoms to serve as a guide for the diagnosis, and to him, therefore, belongs the merit of having the first recognized cysticercus of the brain in the living human subject. The post-mortem examinations and the clinical observations of all the published cases of cysticerci of the brain have elucidated the following two important facts, namely, that in the majority of cases the cysticerci are found in the periphery of the brain, in the gray cortical substance, and in the meninges (especially in the pia mater), and that they scarcely ever cause paralysis. These two facts were considered by Griesinger in close relation to each other. In the light of modern researches made by Hitzig, Ferrier, and others, this coincidence can now be explained, as also the fact that cysticerci of the brain cause morbid phenomena, principally in the psychomotor sphere. The epileptic convulsions are sometimes limited to the one opposite side, but more frequently involve both sides of the body, the cysticerci usually occupying symmetrical parts of the convex surface of the hemispheres. The epilepsy caused by cysticerci attacks adults, often robust persons over forty, without any hereditary disposition, and without any traumatic, syphilitic, cardiac, or other cause; it is often accompanied with derangements in the psychical sphere, with deafness, blindness, headache, abnormal pupils, somnolence, tremor, and many other symptoms somewhat resembling the condition of general paralysis of the insane.

Westphal,† who likewise made the diagnosis of cysticerci in the brain, verified at the post-mortem, describes, in addition, peculiar characteristic movements (automatic gesticulations) exhibited by the patients. These gesticulations very probably depend on the irritation of the cortical motor centres produced by the cysticerci, and Samt‡ has shown that they may be caused by any inflammatory irritation of the cortical surface, and therefore are often met with in general paralysis of the insane.

The study of animal parasites is of great importance both to the physician and the community at large, a considerable percentage of whom suffer and die from want of knowledge of the subject and necessary precautions. Thus the anchylostomum duodenale causes great ravages among the Egyptians and in some other places. In Iceland the sixth part of the population die from diseases produced by the echinococcus, and in the tropic regions of the old and new world the most frequent and serious affections arise from animal parasites. Even among the most civilized communities diseases caused by entozoa are very common, often dangerous and fatal. The absence or neglect of prophylactic measures shows how little the subject has been popularized as yet, even among the profession. Numerous observations and direct experiments have proved beyond doubt that the principal source of development of animal parasites in the human subject is the eating of raw or not sufficiently cooked meat and fish. Referring the reader to the works of Davaine, Küchenmeister, and especially Leuckart for details,* I give here only a short sketch of some of the most frequent animal parasites, in order to make clear the prophylactic measures bearing on the diet.

The tapeworms (cestodes), though known to the ancients, have been thoroughly studied only recently as regards their mode of development and metamorphoses. The tapeworms which live in the human body (small intestine) are the tænia solium, tænia medio-canellata, tænia nana, and others, and also bothriocephalus latus and bothriocephalus cordatus. The different cysticerci, which are the undeveloped form of these parasites, often reach a considerable size, and are most dangerous because they may inhabit all the important organs of the human body. The tapeworm represents a whole colony of individuals (proglottides), the mature ones containing hermaphroditic sexual organs, eggs, and embryones. The tapeworm develops itself only in the alimentary canal of certain animals, whence portions (proglottides or their eggs or embryos) are eliminated, and if swallowed by another animal do not directly develop into a tapeworm, but into its primitive form (cysticercus). These cystic worms make depredations in different organs (cellular tissue, muscles, liver, kidneys, lungs, eyes, brain), but never develop into sexually mature creatures until eaten with the flesh they inhabit by another animal. When they enter the alimentary canal of the latter, they assume again the original form of a tapeworm, maturing into individuals with eggs and embryones. The different generations present, therefore, different metamorphoses. The primitive or youthful form, destitute of sexual organs—the cysticerci—live in one animal, and develop into the mature sexual form—tæniæ—only in the intestinal canal of another.

Into the human body the cysticerci are carried with

* Griesinger: Gesammelte Abhandlungen. Berlin, 1872. Cysticerken und ihre Diagnose. Bd. I., p. 399.

† Westphal: Archiv für Psychiatrie und Nervenkrankheiten, Bd. 4, p. 482.

‡ Samt: Zur Pathologie der Rinde. Archiv f. Psych. und Nervenkr., Bd. 5, p. 201.

* I most earnestly recommend the study of helminthology, which recently has shed so much light on our biological knowledge, as, for instance, on the doctrine of spontaneous generation, etc. Especially from Leuckart's work (Die menschlichen Parasiten und die von ihnen herrührenden Krankheiten), the practitioner will learn the causes of many grave diseases, and receive hints how to prevent them, while the student of histology and embryology will find in this work most appropriate subjects for investigations. For example, he can learn to observe in a single specimen of Ascaris nigrovenosa (which can be found almost in every brown frog during summer) all the phenomena of embryonic development. One such specimen contains many hundreds of eggs in all the stages of development toward a living creature with its various tissues and organs.

the flesh of animals which serve as food (they are almost always present in the hog), and develop into tapeworms in the intestinal canal. The ova or embryones of the latter, which develop into cysticerci in the human body, enter it in two different ways. First, through self-infection, when by vomiting fragments of an existing tapeworm are thrown into the stomach and dissolved by the gastric juice, thus allowing the embryos slip out. They do not, however, remain long in the stomach, but with the aid of their hooks pass through its wall and invade internal organs. Or the eggs of a tapeworm from a dog, cat, or other animal, with whom the patients come in frequent contact, get in some way or other into the food or are otherwise swallowed. This is very often the case in Iceland and in other places, where men live together with animals. The dog being the only bearer of the tænia echinococcus, from it therefore originate the echinococcus cysts in the man and pig. The licking of hands by dogs, and the kissing of animals, may perhaps be the medium of communicating the eggs. They may, however, enter the stomach with the raw vegetables and fruit, if the latter are not previously cleaned, also by drinking unclean water from tanks or ponds.

Of the trematodes I will only mention the most frequently met with, the distomum hepaticum and distomum hæmatobium. The places of predilection of the distomum hepaticum are the biliary ducts and the gall-bladder, whence they often penetrate into the portal and hepatic veins, and through the latter find their way into the general venous circulation. The young worms probably pass from the intestinal canal into the biliary ducts and penetrate into the blood-vessels. According to Küchenmeister (Menschliche Parasiten) the conglomerated eggs of the distomum hepaticum may occasionally become the nuclei of gall-stones. Secondarily the liver becomes affected, and ascites follows.

One of the most dangerous parasites known is the distomum hæmatobium, first discovered by Bilharz. The sexually developed worms are found mostly in the trunk and branches of the portal vein, and in the venous plexuses of the urinary bladder and of the rectum. They live on blood, and their intestinal canal is found full of blood-corpuscles. The great danger this parasite inflicts upon the patients is caused by the accumulation of its innumerable eggs in the mucous membranes and submucous tissue of the urinary organs and of the large intestine, which leads to severe inflammation and other affections of these organs. This parasite makes great devastations in Egypt. Griesinger found there, in 363 autopsies made by him, 117 affections of the urinary organs caused by distomum hæmatobium, and according to Bilharz scarcely half of the adult population of Egypt remain free from it. Besides affections of the urinary organs, which undermine the general health and may terminate fatally, the distomum causes affections of the large intestine, accompanied with diarrhœa and assuming the form of dysentery, often with a fatal result.

I shall omit considering the different human parasites belonging to the nematodes (ascaris, oxyurus), as they are more generally known, and are common all over the world, one-half of the children between three and ten years, and a great number of adults, suffering from them everywhere. For details I refer the reader to the work of Leuckart and that of Davaine (*Traité des Entozoaires*, p. 121). I shall make a few remarks only in reference to trichina spiralis. This nematode, the most dangerous of human parasites, exists, like the cestodes, in two distinct metamorphoses. In the striated muscles it remains in its encysted form, with undeveloped rudimentary sexual organs, for many years (even twenty or more), until its death or that of its possessor, without undergoing any noticeable change except the thickening or calcification of its capsules. But as soon as the muscles infected with trichina are introduced into the stomach of any appropriate animal, or especially into the human stomach, the capsules are dissolved by the gastric juice, and the trichinæ begin a new and rapid development. They grow in size, and the generative organs of both male and female worms develop wonderfully quick. At the end of twenty-four or forty-eight hours the trichinæ are found in the small intestine filled with sperm and ova, and soon numerous embryos become free, each female producing at least 1,500. The intestinal trichina is the developed, sexually mature form of this parasite. While with cestodes self-infection occurs seldom and in exceptional cases, with trichina, on the contrary, it is a rule. The embryones of the intestinal trichinæ penetrate through the intestinal canal by way of the loose connective tissue (Leuckart), or the lymphatics (Virchow), or the blood-vessels (Zenker and others), into the muscles, where they subsequently become encysted and remain permanently. The intestinal trichinæ are viviparous and endowed with great fecundity. During their short existence in the intestinal canal (they live about two months, a great contrast with the longevity of the trichinæ of the muscles) many millions of the young ones infest all the striated muscles, especially the small muscles (of the eye, throat, etc.), the heart alone making an exception. The invasion of the muscles by the trichinæ at first causes local disturbances —diarrhœa and muscular pain—but soon follows a general disturbance of the system and febrile reaction resembling typhoid fever, with prostration, loss of muscular power, collapse, hoarseness, perspiration, and œdema. This morbid condition, which often terminates fatally, is caused by the sudden destruction of muscular tissue, the products of decomposition of which act deleteriously upon the system. The mass of encysted trichinæ is sometimes larger than the remaining muscular tissue.

As a single trichinous hog may infect a large number of individuals, the disease trichinosis often appears as an epidemic.

We are not acquainted with any fact proving that man is primarily infected with the eggs of trichinæ, as is the case with koprophage animals (pigs, rats); therefore the only source of infection for man is pork (unless rats, or any other animal feeding on them, is taken as food). The number of trichinous hogs varies, according to the prophylactic measures used in raising them. In this country, about one hog out of forty may be considered as infected with trichinæ, and this frequency of infection is attributed to the custom of feeding hogs with the refuse of slaughter-houses, and allowing them to devour rats. It seems strange that with the general consumption of pork, cases of trichinosis are not more frequent; but this is owing to the fact that pork is very seldom eaten raw, but mostly cooked, salted, or smoked. The experiments of Leuckart and others show that trichinæ are endowed with a higher degree of resistance than even the cysticerci to cooking processes, to putrefaction, or exposure to low temperatures. Trichinous meat, subjected to extreme cold during several days in winter, and completely frozen, produced trichinosis in a rabbit.

The trichinæ are killed only by a temperature of

130° or 155° Fahr., which coagulates their albumen; but to 126° Fahr. they can be subjected with impunity for any length of time. Therefore, to make a trichinous piece of meat innocuous, it ought to be under boiling heat for a considerable time, so that its interior should not present a rare, bloody appearance, where the trichinæ are still alive, and able to infect the consumer. Ham and sausage ought to be cooked in a similar way, as rare trichinous meat invariably produces trichinosis. Salt and smoke kill trichinæ only if, like heat, they are made to act upon them thoroughly; insufficient salting and smoking do not preserve from infection. The best and simplest means of preventing trichinosis is therefore to have the meat thoroughly cooked, salted, or smoked.

Trichinosis is easily diagnosticated. During the first weeks after the infection, we find in the diarrhoic mucous pregnant trichinæ with living embryos (intestinal trichinæ). In the later stages of the disease, the microscopic examination of a small piece of muscular tissue (taken with a harpoon) will reveal the muscular trichinæ.

After this digression from the principal subject, we may well consider if it is not our duty to warn patients and the public at large against the use of raw meat, explaining the danger to health and life from infection with animal parasites.

The rational prophylaxis against animal parasites consists principally in the cleanliness about the house and kitchen; to have the meat well cooked, and not to partake of it when raw or underdone; to thoroughly cleanse or wash vegetables and fruit, and not to drink unclean, stagnant water; to remove from the house and kitchen dogs, cats, and other animals.

The drinking of fresh blood, now gaining ground, ought to be condemned; should further experience prove that the blood contains some peculiar dietetic virtues not possessed by milk and other animal products, then it ought to be taken boiled.

From a dietetic point of view, there seems to be little difference whether beef, mutton, or any other kind of meat is taken, provided it be well and palatably prepared—not greasy or burnt. In dyspepsia a variety is rather useful, and there can be no objection to any kind of poultry and game (well cooked), although the flesh of some fowl (goose, duck, etc.) is difficult to digest, and has to be used with discretion. Next to meat, fish is very nourishing and digestible, but must be well cooked, as it also may become a source of infection with animal parasites (bothriocephalus latus, etc., from salmon and other fishes). As an article of diet, it is not equal to meat, and the assumption that fish furnishes the system, especially the nervous centres, with phosphorus, is exaggerated, as a great many other articles of diet equally supply phosphorus (meat, milk, eggs, bread, etc.).

A most excellent article of diet for dyspeptics is unquestionably fresh milk (with alkaline reaction); but it must be unadulterated and come from healthy (not tubercular or otherwise diseased) cows. Klebs* experimentally produced tuberculosis in young animals by feeding them with milk from tubercular cows. In recommending milk to dyspeptics we must be sure of its quality, and suspicious milk ought always to be thoroughly boiled. Cream, which is nothing but fat, cannot be a substitute for milk, and is rather injurious to dyspeptics, unless used instead of butter, with amylaceous and farinaceous substances.

Eggs, *a priori*, are the most nutritious dietetic article, considering that they contain everything necessary for the formation of a vertebrate animal. Nevertheless, some people think that eggs disagree with them, and produce indigestion. This can only be the case when eggs are not fresh, and undergoing decomposition, or it may be merely a preconceived idea in persons who in their childhood ate a bad egg, which produced indigestion and vomiting, and they remain all their life under that impression. It makes little difference whether the eggs are cooked soft or hard, as the albumen (whether previously coagulated or not) is always transformed by the gastric juice into the soluble modification. But when eggs are not perfectly fresh, it is best to cook them thoroughly, in order to arrest their decomposition (putrefaction), and prevent indigestion.

The vegetable dietetic substances from the classes of the cerealia and leguminosa contain the inorganic salts of the blood—potassium and phosphoric acid, in combination with organic substances belonging to the groups of albuminates, hydrocarbons, and fats.

Bread is the representative of the nutritive vegetable substances, and contains the largest amount of albuminous matter. For dyspeptics it ought to contain no admixture of fat, milk, sugar, molasses, etc., but be made very light, simply with water, salt, and good yeast, and well baked. The crust formed in well-baked bread by the greatest amount of heat acting upon the external layers contains the products of decomposition (starch-gum, etc.), which add to the flavor of the bread, make it more palatable, and increase its digestible properties.

Peas, beans, and other leguminosa are also very nutritious, containing much albuminous substances (legumin or vegetable casein), and also lecithin and cholestearine. In cooking them for dyspeptics their capsules ought to be eliminated, as they cause flatulence.

The nutritive properties of potatoes are below those of the above-mentioned vegetables. They contain from 70 to 81 per cent. of water, while the others contain from 9 to 19 per cent., and of albuminous substances potatoes contain only 2½ per cent. On the other hand, they have 16 to 23 per cent. of starch, and their ash contains 60 per cent. of potassium and 13 per cent. of phosphoric acid, thus proving their great value for the animal economy when compared with the ash of blood. On that account they are useful, for instance, in preventing scurvy on ships. However, as their nutritive value, in a given quantity, is less than that of the other vegetables already enumerated, dyspeptics must forego eating too many potatoes.

The different kinds of amylaceous substances—arrow-root, sago, tapioca—are identical with the starch of potatoes. Dyspeptics can partake of them with benefit.

Fresh fruits contain over 71 per cent. of water, and therefore do not belong to a nourishing diet. They contain principally sugar, gum, cellulose in combination with different organic acids. But their salts are those of the blood, and on that account, as well as for their organic acids, they are reckoned among the refreshing dietetic substances. Especially lemon-juice contains a large amount of potassic salts, so indispensable to the animal organism. In chronic gastric catarrh, however, fresh fruit are not well digested, neither are the saccharine and acid substances in general.

Vegetables such as beets, asparagus, cabbage, lettuce, spinach, etc., though containing but little of the nutritive substances, are nevertheless of great importance to the animal economy, because their salts are

* Klebs: Die künstliche Erzeugung der Tuberculose. Arch. f. exper. Pathologie und Pharmacologie. Bd. I., p. 163.

the same as those of the blood. Unfortunately they are not easily digested by dyspeptics, and may cause pains; hence, they should be avoided during the existence of gastric catarrh.

As regards beverages, dyspeptics ought to be allowed to drink, besides water in sufficient quantity, tea, coffee, and even chocolate, if it agrees with them. Although these articles are often prohibited to patients in general, they are, nevertheless, very wholesome and useful beverages. They all contain the same active principle—a nitrogenous organic basis—thein, caffein, theobromin, which are chemically and physiologically identical, and which act upon the system in the same way as the extractive substances of meat. The infusion of tea contains, besides, a considerable amount of soluble salts of iron and manganese. Their ash is similar to that of the blood. These beverages stimulate in a moderate degree the muscular and nervous systems, improve the circulation, and thus increase our physical and mental productivity. However, they ought not to be indulged in to excess, as then they would diminish the appetite, and the amount of food requisite to support a healthy condition of the system would not be taken.

We are often asked which diet is the most wholesome, vegetable or animal, and if man could better subsist on exclusively vegetable food (vegetarianism). This question, though not bearing directly upon our subject, is yet, as regards dietetics in general, of great interest to the physician and the community.

Theoretically, the animal and the vegetable food each contains all the constituent parts necessary for the nutrition and functions of the animal economy—albuminates, hydrocarbons, fats, the necessary salts, and extractive substances.

On the other hand, the digestive apparatus shows conclusively that man is intended to be omnivorous, and our instincts and experience prove that a mixed diet—of both vegetable and animal substances—is the most appropriate.

There exist experiments, as it were, on a large scale which well demonstrate the relative value of exclusive animal or vegetable food.

The nomadic inhabitants of the Kirghis steppes (Central Asia) are a healthy, muscular, strongly built race. They live exclusively on animal food (mutton and horse flesh), and have no bread or vegetables of any kind. Their principal beverage is fermented mare's milk, called Kumys, to the important dietetic properties of which I was the first to call the attention of the profession.* I had an opportunity of observing them for nearly two years, when a member of an expedition sent by the Russian government to Central Asia in 1857, and noticed the remarkable fact that the Kirghis are entirely exempt from pulmonary consumption.

As a contrast to this physically robust race of carnivors, we may mention the Japanese, who until quite recently lived almost exclusively on a vegetable diet, with an addition of fish. According to Wernich (formerly of Berlin, and now professor of medicine in Jeddo),† the Japanese are physically a weak race, exhibiting a peculiar debility of the organs of circulation, which is probably the cause of the disposition to their gravest and fatal endemic disease, "Kakke." It is in many respects similar to the fearful endemic disease, "Beriberi," of East India and the adjacent islands, the inhabitants of which are also mostly vegetarians. The Japanese react very sluggishly to irritants, even the most intense ones calling forth but an asthenic fever, and sometimes no fever at all.

Convalescents from gastric catarrh often inquire whether it would be best, after their complete recovery, to abstain from entirely satisfying the appetite, the prevailing opinion being that people should generally eat less than they feel inclined to. This popular opinion seems erroneous, as under normal conditions the appetite ought to be the best guide for the quantity and quality of food required for the system. However, we know from experience that the appetite may become deranged and mislead us. Moreover, a mere habit may prompt people to eat too little or too much, and the French saying, "L'appétit vient en mangeant," is very often correct. But of the two evils—too much or too little food—the latter certainly is the most objectionable, for it invariably leads to a deficiency in the nutrition of some organ or of the whole system. As we cannot always possibly determine the quantity of ingredients necessary for the nutrition of each tissue and organ, it is far better to present to the system a somewhat larger supply of food, from which it will select the necessary materials, and eliminate the superfluous.

Some people are under the impression that it is best to abstain from nourishing animal food during the heat of the summer, and live mostly on vegetables and fruit. My experience, however, in Central Asia and here, has convinced me that we are better able to resist the effects of intense heat by partaking of nourishing food—a mixed animal and vegetable diet—and by keeping, at the same time, the skin in a good condition for its enhanced function—to perspire freely.

The diet and treatment of patients affected with chronic gastric catarrh, accompanying ulcer of the stomach, must necessarily be different from those employed for dyspeptics with the idiopathic form. In the first case the food must be given only in a liquid state—beef-tea, milk, etc. The most efficient treatment consists, according to Hertzka,* of repeated doses (on the empty stomach) of chloral (which acts as an antiseptic and narcotic) and of Carlsbad water. I have no personal experience as regards the efficacy in this disease of rectal alimentation, to the exclusion of all nourishment through the stomach.

Chronic gastric catarrh of the most obstinate kind sometimes accompanies chronic poisoning from lead, zinc, mercury, and arsenic.

The cachectic appearance of such patients, and the insidious manner in which the saturation of the system with the poison takes place, are often a source of diagnostic errors, the existence of carcinoma being frequently suspected. I treated a patient (Mr. V.), in June and July, 1878, who was in the highest degree emaciated, cachectic looking, and feeble; he could scarcely eat anything, had a great deal of gastralgia, dilatation of the stomach, eructations, and costiveness. For many years he slept in a room filled with the dust from manufactured articles of india-rubber, impregnated with salts of lead, and his disease was a source of diagnostic and therapeutic errors. He is now doing well.

Such cases of toxtic gastric catarrh require, besides the dietetic and medicinal treatment recom-

* Beobachtungen aus den Kirgisen-Steppen von Hofrath Dr. Neftel. Würzburger medicinische Zeitschrift, 1860, Bd. I., p. 61.

† Wernich: Klinische Untersuchungen über die japanische Varietät der Beriberi Krankheit. Virchow's Archiv, Bd. lxxi., Heft 3.

* Hertzka: Zur Behandlung des Magengeschwürs. Centralbl. f. d. med. Wiss., 1878, No. 26.

mended in my first article, a specific treatment of the lead, zinc, or other poisoning.

Gastric catarrh may also accompany diseases of the pancreas. The diagnosis is possible if a tumor can be felt, or in the earlier stages, when the fatty substances of the food are evacuated by the bowels unchanged; but later, when gastrectasia and the morbid fermentation have reached a very high degree, and when almost every kind of food remains undigested and is thrown up, the diagnosis becomes exceedingly uncertain.

Very frequently gastralgia with gastrectasia and a variety of distressing local and general symptoms constitute a morbid condition, which I designate as hysterical dyspepsia. Its real nature is often misunderstood, and thus a high degree of anæmia and emaciation is allowed to be developed and to continue for years until either pregnancy or some intercurrent disease produce a change in the chronic disorder.

The following case may serve as an illustration:

Mrs. B., wife of a physician, about thirty years old, came under my care, June 7, 1878. Though of a good constitution, and formerly healthy, has been an invalid for the last four years, and is greatly emaciated and anæmic. She suffers a great deal from gastralgia, eructations, costiveness, and general debility; she scarcely ever walks, and for the greatest part remains in bed. The best digestible kind of food increases all the morbid symptoms, and therefore she eats so little that it is barely sufficient to sustain life. She tried various methods of treatment and changes of air, but all without avail. Her gastric symptoms were ascribed to an anteflexion, and although a special treatment improved the local affection, the disease remained in *statu quo*. Last summer she was very ill in the country, and therefore decided to remain this year in the city to be nearer to medical assistance. I found the stomach much dilated, but all other organs normal. The patient said that, except milk, she could never partake of any nourishing food (meat, bread, eggs), as it would invariably make her suffer the greatest distress, and she would have to remain in bed, and spend sleepless nights. But as for cheese, sardines, and other articles, considered indigestible, she was able to eat them, with impunity, and they agreed with her very well. She abstained, however, from taking them, at the advice of her physicians. I applied an intense induced current to the dilated stomach, and the application was followed by an immediate relief and a sensation of general comfort I advised her to eat nourishing food, especially meat, in gradually increasing quantities, to take iron with her meals, diluted hydrochloric acid after them, and to continue daily the electrical treatment. Her general health improved rapidly, and the gastric symptoms began to disappear. In this case the fact that the patient could eat sardines and other indigestible substances, which would have been impossible in the ordinary form of chronic gastric catarrh, was suggestive of the hysterical nature of the disease.

Gastric catarrh of long standing often leads to some neuralgic affections, of which I shall give a detailed account in a separate paper. Here I shall merely mention that the occipital or occipito-cervical pain is a very common symptom in chronic dyspepsia, and readily yields to the galvanic treatment employed in conjunction with the treatment of gastric catarrh. However, it ought not to be confounded with incipient cervical pachymeningitis, which is a grave and quite different affection.

A CASE OF ASTIGMATISM WITHOUT ASTHENOPIA OR CONSCIOUSNESS OF IMPERFECT VISION.

By DAVID WEBSTER, M.D.,

NEW YORK.

The following case is considered of sufficient interest for publication for several reasons. In the first place, it may be thought remarkable, that although the patient sees nearly three times as well with his left eye as with his right, he has arrived at the age of forty-two without ever having had his attention called to the fact. He had not the remotest suspicion that his vision was at all imperfect with either eye. Again, it may be thought uncommon that with mixed astigmatism in both eyes, and with one more astigmatic than the other, he should not have suffered from some of the many symptoms of asthenopia, always liable to be brought on in such eyes by the straining of the focalizing apparatus to overcome the error of refraction. It is remarkable also, that when this straining of the muscles of accommodation was so increased, by the addition of presbyopia to the previously existing refractive error, that it could no longer conceal its effects, instead of the more common asthenopic symptoms, such as pain, blurring of vision, lachrymation, etc., the first intimation should come in the form of styes and their offspring, chalazia. This case goes to support Dr. B. St. John Roosa's theory, of which I have no doubt of the correctness, that blepharitis may be, and frequently is, caused by the efforts of the accommodative apparatus in overcoming errors of refraction.

It will be observed that the occupation of Mr. S., that of a clerk, has always entailed a close use of his eyes, which renders the case more remarkable than if it had occurred in the person of a farmer.

Thos. P. S., aged 42, clerk, consulted Dr. C. R. Agnew, August 23, 1878. He states that some time in the summer, his left eye "got out of tune." The lower lid looked red and was somewhat swollen. He went to his family physician, who examined his eyelid, and said he was going to have a sty. The doctor cauterized his lower palpebral conjunctiva in the hope of aborting it. The patient has since used slippery elm poultices, Pond's Extract, etc. There is now some blepharitis and two small chalazia of the lower lid. Right eye, vision $= \frac{20}{40}$ ($\frac{1}{2}$) without a glass; vision $= \frac{20}{20}$ with $-\frac{1}{40}$c. axis 10° $\supset$ $+\frac{1}{60}$c. axis 100°. Left eye, vision $= \frac{20}{30}$ ($\frac{2}{3}+$) without a glass; vision $= \frac{20}{20}$ with $-\frac{1}{60}$c. axis 180° $\supset$ $+\frac{1}{60}$c. axis 90°. No insufficiency by prisms and colored glass. Ophthalmoscopic examination shows no lesion. The patient never had any sense of insufficiency in vision or in the endurance of his eyes, nor did he ever notice that he saw better with one eye than with the other. In fact, nothing ever called his attention to his eyes until this inflammation occurred in the lower lid of his left eye.

As regards the treatment, the indications are, first get rid of the tarsal tumors by operation, then prescribe suitable spectacles for the patient.

19 EAST THIRTY-NINTH STREET.

PARIS EXPOSITION AWARDS.—William R. Warner & Co., of Philadelphia, have received the highest award (a bronze medal) for sugar-coated pills; Hance Bros. & White, of Philadelphia, a similar medal (bronze) for fluid extracts; and John Wyeth & Bro., of Philadelphia, likewise a bronze medal for their compressed pills. These medals are the highest given for the articles named.

A CASE OF SCIATICA OF SIX MONTHS' DURATION CURED BY STRETCHING THE SCIATIC NERVE.

By WILLIAM A. BYRD, M.D.,

QUINCY, ILLINOIS.

APRIL 18, 1878, I saw Christopher Goll, a German weaver and dyer, aged 56, who had been confined to his bed for some five months with sciatica of the right side. During the most of the time he had been under treatment, and had been blistered, cupped, rubbed with irritating liniments, treated constitutionally and locally with electricity and other things, with no relief whatever. His general health was good, but the pain was so great that he got but little rest, having to lie in bed upon his left side, with the right thigh flexed upon the body and the leg upon the thigh. Any effort to change the position of the thigh or leg was followed by excessive pain all along the course of the sciatic nerve, from the heel to the small of the back.

Having had excellent success in a case of long-standing sciatica by injecting hypodermically a two per cent. solution of carbolic acid along the course of the sciatic nerve just back of and below the trochanter major, I concluded to try it in this case. Every other day for four weeks thirty minims of the solution was injected; still there was no relief except when under the influence of anodynes. I now determined to cut down upon and stretch the sciatic nerve.

May 27th, assisted by Drs. M. Rooney, J. F. Durant, L. H. Cohen, W. C. Pipmo, and J. A. Wagner, I exposed the sciatic nerve by making an incision four inches long, commencing at the lower edge of the gluteus maximus muscle and extending downward in the sulcus between the vastus externus and long head of the biceps cruris muscles. Parting the muscles with the handle of the scalpel, the nerve was exposed and raised by hooking the index-finger under it. Tension to the extent of almost raising the limb was made upon the nerve; this caused it to become slightly elongated, but giving way of tissue was not felt to have occurred during the stretching. The nerve was carefully replaced and the wound closed with interrupted iron wire sutures, and covered with a compress of soft, dry cloth retained with a roller. There was not a drachm of blood lost. One week afterwards the sutures were removed, the wound having healed without a drop of pus having formed.

The pain was relieved as soon as the operation was ended. He could immediately lie upon his back, and even upon the right side.

There was still contracture of the flexor muscles, which gradually gave way with exercise, which he began to take the second week after the operation. There was paralysis of feeling in all the muscles supplied by the sciatic nerve, that gradually left him, it being nearly six weeks before he was entirely free from it; the upper portion of the gastrocnemius muscle being the last to regain sensation, and the outer portion of the muscle the very last.

As the paralysis disappeared the muscles would ache—not pain—for three or four days, when complete sensation would ensue.

During his convalescence I put him on no treatment except careful dieting, by that means being sure that it was the operation that gave him relief.

He now claims to be perfectly well.

This operation only dates from 1872, but has already achieved magnificent results, and I believe has greater conquests to make in the future. I make no comment upon this case, but refer the reader to the *American Medical Bi-Weekly* for December 8, 1877, for an admirable abstract from the *Medical Times and Gazette* of a review of Professor Paul Vogt's—of the University Greifswald—book upon nerve-stretching. It is so well written, so clear and concise, that I will not mar it by quoting.

327 JERSEY STREET, July 22, 1878.

Progress of Medical Science.

SKENE ON LACERATIONS OF THE CERVIX UTERI.—The repair of the lacerated cervix uteri being now an operation that is gradually assuming a more and more important place in uterine surgery, Dr. Skene has furnished some notes illustrating his experience in managing some cases during the past year.

He finds that preparatory treatment is usually necessary before the final operation is attempted.

For example, when there is a bilateral laceration reaching to or nearly to the vaginal junction, the erosion of the parts is so great that large portions of the surfaces have to be removed before the edges can be properly brought together, otherwise the tension on the sutures will cause them to cut through the tissues. In such cases he merely approximates the lacerated parts about ten days before the operation, confining them to their proper place with two bits of sheet-lead on either side of the cervix. The vagina is then carefully tamponed with marine lint, so that the surrounding parts are not chafed by the lead. This lint may be retained several days in situ without becoming offensive. At the end of a week the clamp is to be removed, and then the tissues will be found softened and improved. The marine lint tampon alone will accomplish much of the same effect.

In two cases treated in this way the erosion disappeared, and the cysts which had existed decreased in number, though of course the improvement was only temporary. Dissatisfied with the silver wire suture, he determined to use silk. In a recent case, where eight silver sutures had been used, there was no union when the wires were removed at the end of a week. As the parts were granulating, Dr. Clarke brought them together with six of Hoff's automatic needles, the vagina being tamponed and the patient remaining in bed. Still no union was obtained; a month later silk was used, and at the end of a week perfect closure was the result. These sutures are easily tied by using Carroll's knot-tier, or by passing the loop of a Thomas curette over one thread, and making traction laterally with that, holding the other thread firmly in the fingers. In the after-treatment the less interference the better. He always introduces the marine lint tampon, leaving it in position for forty-eight hours. After its withdrawal, unless there is vaginitis or marked leucorrhœal discharge, he never employs a vaginal injection, but care is exercised to keep the external parts clean. The bowels are not confined, nor is the diet restricted in any special way. An anæsthetic is usually unnecessary. If pockets or pinholes remain after removing the sutures he leaves them alone for some weeks, until the process of involution has been fully completed, when they will be found to have greatly diminished in size. If large enough to require treatment, a drop of nitric acid may be gently inserted into the pocket.—*Proc. of the Med. Soc. of the County of Kings*, June, 1878.

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New York, September 28, 1878.

HOMŒOPATHY AND EXCLUSIVENESS.

The recent action of the Medical Society of the County of New York regarding the relations of exclusivism and so-called liberal homœopathy is apparently still open for further explanation. It would appear that a part of the burden of this latter must fall upon us in the way not only of keeping the real points at issue properly before our readers, but of maintaining our original position against the chances of being misunderstood. Our aim has simply been, from the beginning, to give the subject a fair discussion, to express an unbiased opinion upon the facts of the case, and with no desire to uphold the action of the Comitia further than appears to be right and proper. That this explanation seems necessary is quite evident from the tenor of the remarks of our esteemed correspondents in the present issue.

Although the communications are from two different sources, there is such a similarity in the language and the ideas expressed upon one or two points in the editorials referred to, that we take advantage of the coincidence by answering in a general way.

As we have said on a previous occasion, the Comitia took the only course left them in answering the question of exclusivism as applied to so-called liberal homœopathy. We can scarcely imagine a more satisfactory way than the definition of the term, in the first place, and the direct application of the definition, afterwards. Such a course prevents that misapplication of terms which makes the consultation with the dictionary so necessary in conducting discussions. We fail to see how the answer could be misunderstood, and consequently how it could be evasive. There does not appear to be a claim that the Society failed to appreciate its significance, or that there were any doubts as to the true meaning of the propositions. So far, then, as such a result was concerned, the answer was in point of directness equivalent to yea or nay.

This statement has been so explicitly made by us, on two former occasions, that we notice with surprise that both correspondents, with a striking similarity of construction and ideas, coincidently of course, strive to prove the falsity of our position by quoting our own words as applied to an exactly opposite idea. We merely wish to say, in passing, that we do not object to the quotation, which is correct as far as it goes, but we take exception to its application. The original, instead of showing by anything we said that the committee evinced a "disposition to dodge a plain duty," etc., really reads thus: "Unless the committee showed a partisan spirit, evinced a disposition to dodge a plain duty, or was tempted to yield to the impulses of mere prejudice, it could not have given a different answer." This is a comparatively trivial matter, it is true, but we cannot take to ourselves the credit of giving more than our share of the argument.

Whether the Society believed the application of the definition to the so-called liberal homœopaths was correct or not, deserves some consideration as an offset to the assumption that the vote was founded on mere prejudice. As the discussion proceeds, we are becoming more and more convinced that the principal difficulty rests in a distrust of the good faith of the liberal homœopaths in the stand they have taken. This, after all, appears now to be the best manner of reconciling the various explanations of the verdict of the Society. In fact, one of our correspondents, whose clear-headedness the profession has had ample opportunity of testing, appears to lose sight of the main conditions of admission to our ranks, viz., a good medical education, a good moral character, and a renunciation of exclusivism. These are the starting-points, the foundations upon which the merits of liberalism in homœopathy must rest. Without assuming the existence of these conditions, the whole interest of the discussion falls to the ground.

Again, the guarantee of the fulfilment of such conditions does not depend upon the "ipse dixit" of any individual who may wish to consult with a "liberal homœopath," but upon a verdict of his county society. In other words, the "liberal" must be a member of the Medical Society of the County of New York, or of a similar regular medical organization, before his professional standing is fixed, and before consultations with him are proper. Under such circumstances it would make no difference as to any opinions regarding the size of a particular dose or the theory of the action of particular drugs. These are individual matters, with which no one has a right to meddle, and on which no society has a right to pass a verdict.

But we are now looking through the "loop-hole," to which allusion has so often been made, and have consequently advanced beyond the real boundaries of the present question. It is, however, natural to do so, for

the sake of showing that the Society would have been safe in voting upon the question of exclusivism by itself, independent of any side issues, and that the latter would take care of themselves at the proper time. We have expressed the opinion that, so far as a direct answer to the propositions was concerned, the Society stultified itself by its vote. If the decision had been to the contrary, a step would have been taken in the right direction of offering an opportunity for applications for membership on the part of liberal homœopaths. Under such circumstances, each case would have been examined on its own merits, and no one could have been admitted who did not fulfil all the necessary conditions, and who did not guarantee to drop the sectarian title, and cease to use it as a trade-mark of deception for the people.

This course would very definitely settle any doubts as to the sincerity of the candidates and their proper position before the public. As it is, however, the Medical Society of the County practically denies the right of any such applications, and virtually places itself upon record as opposed to the exercise of merely individual opinions. The whole matter rests now just where it did before the querist propounded his question, and before the Comitia attempted to make it intelligible to the Society. That such is the case, however, is no reason why it should be assumed that the Code does not need to be altered to suit the emergencies of the situation. The very fact that the Society saw a "loop-hole" through which any querist might dodge, and voted accordingly, quite conclusively proves that something more than the Code, as it now is, was needed.

The remarks of one of the correspondents regarding the necessity of each party sailing under its own colors hardly admits of any direct application to the points at issue in this discussion, as from the start it has been advocated that there shall be but one banner, and that no distinction of mere creed or sect should be recognized. Whenever we lose sight of the grand principle that underlies this question, all the talk concerning liberty of thought and of opinion becomes the merest cant, and apparent sincerity degenerates into transparent hypocrisy.

THE YELLOW FEVER COMMISSION.

THE suggestion for the appointment of a Yellow Fever Commission, first made by the citizens of Memphis, and so strenuously urged by others in infected localities, is beginning to take a practical shape. As previously announced, the Medical Society of this county is shortly to hold a meeting for the purpose of advising Congress to make the necessary appropriation for such a commission. As there can be but one view of the necessity of the measure, it is easy to foretell the result of the vote and the earnestness with which the necessary appeal will be made. There is also no doubt that there is much to learn concerning the supposed cause, spread, varying type, and general management of the disease. The present epidemic through which we are passing, and the end of which we are approaching, has been an exceedingly fruitful one for experience and study. The observations have spread over a comparatively wide field, and under apparently opposite conditions as to sanitary regulations. The disease has assumed a malignancy which equals that of any former epidemic. The attention of the medical profession in the stricken cities has been directed to the study of the disease in its different bearings in a more thorough manner than ever before, while the different theories of the propagation of the disease have received their severest tests. All these facts should be collected in some available form, and should be suitably studied by a competent commission, in order that the terrible lessons of the pestilence may not be lost, and the dreadful experiences of the past few weeks be repeated next year. The general Government is enough interested in any measure calculated to prevent a recurrence of the pestilence to make a large appropriation for the engagement of first-class medical talent. Congress could not cast its vote in favor of a more popular scheme. The materials are at hand, the localities of the fever are within easy reach, and the proper workers are ready to enter the field. It requires, however, more than the action of a single county society to give expression to the views of the profession on this point. The medical societies in the other localities should take up the matter, and make their influence felt in the right direction.

THE AMERICAN ACADEMY OF MEDICINE.

THE American Academy of Medicine has had its third meeting. It is evident, from the fact of the election of forty-five fellows—with a rejection of six or seven more, because they had not the educational qualification, men too of reputation—that there is vitality in the Society. There is a demand from all sides for a higher average standing among physicians; and the Academy rightly, we think, has taken the proper view, when it declares that the proper place to begin, in order to attain the higher standing, is at the beginning. A man must be trained to study in the abstract, and must have some knowledge of the laws of science and of language before he begins to study medicine. Another item for congratulation is, that, while from the very necessities of the case, the articles of association must have been tentative, the proposal for changes were all in the one direction, *i. e.*, insisting upon a complete collegiate course as the only evidence to be received in order to determine a candidate's fitness for election. So that the idea is being crystallized, and there is consequently a greater opportunity for it to be symmetrical. With the provision of a new by-law, securing a careful exami-

nation of all papers, the prospects are that the next meeting in this city will be an interesting one, and will exert a powerful influence in favor of a cultured profession.

Reports of Societies.

AMERICAN ACADEMY OF MEDICINE.

Third Annual Meeting, Sept. 17th and 18th.

ELEVATING THE STANDARD OF MEDICAL EDUCATION—THE NECESSITY OF PRELIMINARY TRAINING—THE ENDOWMENT OF MEDICAL COLLEGES.

THE third annual meeting of this Society was held at Easton, Penn., on Tuesday and Wednesday, Sept. 17th and 18th. The sessions were held in Pardee Hall, one of the buildings of Lafayette College. The first session, on the afternoon of Tuesday, was opened by an address of welcome by Dr. McIntire. The election of fellows followed, forty-five candidates being admitted, among whom were Drs. E. J. Birmingham, V. P. Gibney, C. H. Fox, G. M. Beard, D. B. St. John Roosa, G. F. Shrady, and others, of New York; H. C. Wood, James Tyson, H. Lennox Hodge, and W. H. Allen, of Philadelphia.

The Committees on Seal and Certificate of Membership presented reports, which were acted upon. In the evening the President, Dr. F. H. Hamilton, of New York City, delivered his address. In it he treated upon the imperfect preparation of students of medicine, which, as a consequence, gives imperfect results; examining the nature and extent of the evil, its cause and consequence, and whether the organization will effect its cure. He found that in all civilized countries other than the English-speaking nations, a preliminary examination was required, which equalled or excelled the standard of our Bachelor of Arts degree; that the course was graded, the pupil advances by examination; that four years was the minimum time of study, the professors were salaried, and the final examination conducted by independent boards. This state of affairs differed in the English-speaking nations, the condition in the United States being worse than elsewhere, because our general government could not, and the State governments had not limited the number of lincensing boards; indeed, in some of the States, no license to practise is required. As a consequence, this new industry of manufacturing doctors sprang up, supplying a quality of the article according to the demand, and eventually overstocking the market. How was this to be remedied? It was admitted that as much time and study should be devoted to the study of medicine in the United States as in Germany. If any college should insist upon this most of their students would go elsewhere, and as, with four or five exceptions, the medical colleges are in effect private enterprises, the experiment would be a failure. A full endowment, rendering the faculty independent of the number of students, is the only thing which, in this country, can bring about the reform. In the meantime we must comfort ourselves with the thought that a great many of our students do thoroughly qualify themselves, and voluntarily take a course of instruction equal to that of any country. We must also try to mould public sentiment, and especially advise those about to enter upon the study of medicine.

On Wednesday morning, besides receiving some proposed amendments to the constitution, the following by-law was adopted:

"Papers intended to be presented to the Academy must be submitted to the Secretary of the Council thirty days before the meeting, and may be read after they have been approved by the Council."

The election for officers resulted as follows:

President—Dr. Lewis H. Steiner, of Maryland; *Vice-Presidents*—Drs. R. L. Sibbet, of Pensylvania; E. M. H. Sell, of New York; G. H. Larison, of New Jersey, and R. S. Sutton, of Pennsylvania; *Secretary*—Dr. R. J. Dunglison, of Pennsylvania; *Assistant Secretary*—Dr. C. McIntire, of Pennsylvania, and *Treasurer*—Dr. N. A. Baldwin, of New York.

Additional members of the Council: the ex-Presidents, Dr. P. D. Keyser, of Pennsylvania, and G. F. Shrady, of New York.

The next meeting will be held in New York.

NEW YORK ACADEMY OF MEDICINE.

OBSTETRIC SECTION.

Stated Meeting, Sept. 16, 1878.

DR. SALVATORE CARO, CHAIRMAN.

SORE NIPPLES.

DR. F. V. WHITE read a paper upon the above subject. Preparatory to a proper understanding of the pathology and the therapeutics of this morbid condition, he referred to the anatomy of the part as given by Astley Cooper and some more modern authors. According to the authorities consulted, the doctor stated that there was no erectile tissue in the nipple, such as was found in the penis. The most common varieties of sore nipples were abrasion, fissures, and ulcerations, and their occurrence was most frequent in primiparous women.

PROPHYLACTIC TREATMENT.

With reference to prophylactic treatment, such as bathing the nipples prior to confinement, with alcohol, astringent lotions, etc., Dr. White had great doubt concerning its actual value.

He regarded sore nipples as the most frequent cause of the superficial and the deeper-seated mammary abscesses which occurred during lactation.

The doctor did not discuss the therapeutics of this subject further than to reaffirm his confidence in the use of the nipple-glass, which protected the nipple from irritation, from variations in temperature, and from engorgement by milk. It should be applied as soon as the nipple commenced to be tender.

DR. HUBBARD regarded it as a point well taken, that mammary abscess very seldom occurred unless preceded by sore nipple. He had been inclined to the belief that constantly bathing the nipple with milk, as was the case when the nipple-glass was worn, was injurious rather than beneficial. In that respect, however. he might be in error, and was willing to give the glass a trial.

DOES THE NIPPLE POSSESS ERECTILE TISSUE?

DR. A. C. POST remarked that, while there might be some histological difference between the nipple and the penis with reference to the erectile tissue, at the same time there was present in the nipple a tissue which rendered it capable of becoming erect. He regarded it as an error to say that the nipple did not contain erectile tissue, and, in that particular, he

thought the language of the paper should be corrected.

Dr. White remarked that Cooper did not regard it as erectile tissue proper, and that the same view was held by Flint, as stated in his work on physiology.

Dr. Caro believed that Dr. Post was correct when he stated there was erectile tissue in the nipple; for it was a positive fact that such tissue was present. Whether it was equal to what was found in the penis and the clitoris, he was unable to say; but that the nipple became erect when titillated, and remained so for a certain length of time, had been repeatedly observed. Besides, he believed there was an intimate relation existing between the erectile tissue of the nipple and the erectile tissue of the genital organs of the female; for, when the nipple was sucked, it very commonly happened that a certain kind of voluptuous feeling came over the woman.

Again, it had been long known that friction of the nipples, such as sometimes attended measures prophylactic of sore nipples, might be followed by abortion. Velpeau, Bedford, and some other authors had suggested tickling the nipple for some time as one of the means of producing premature labor.

For that reason, active interference with the breasts and nipples prior to labor had been objected to in the prophylactic treatment for sore nipples.

With reference to remedies for preventing excoriation and fissure of the nipple, he had never found any more serviceable than the saliva of the mother applied two or three times a day.

As for treatment, the application of clear cold water had served him most satisfactorily for hardening the nipple and preventing extension of excoriations after they had been developed. The water was best applied by means of small cloth-compressors. In obstinate cases he had found nothing better than gold-beaters' skin applied to the nipple, and covered, perhaps, with a slight layer of collodion, which would not be removed by a single nursing.

After the exhibition of several varieties of breast-pumps, nipple-shields, and nursing-bottles, by Dr. White, the Section adjourned to meet on the *fourth* Thursday of October.

SECTION ON PRACTICE OF MEDICINE.

Stated Meeting, Sept. 17, 1878.

Dr. Edwin F. Ward, Chairman.

PERITONITIS CAUSED BY INJECTIONS OF TEPID WATER —ONE PINT OF WATER THROWN INTO THE RECTUM OF A CHILD SIX WEEKS OLD.

Dr. S. S. Purple narrated a case as follows: A child, six weeks old, had slight constipation. To relieve this condition, the nurse gave an injection of castile-soap water. A Davidson's syringe was used, and two bulbsful thrown into the bowel. The child at once began to cry and struggle, and evidently was in great pain. The father, who was somewhat accustomed to the administration of injections, came in and said that sufficient water had not been used. Accordingly he threw into the bowel a considerable quantity of water. Within a few minutes the child began to struggle and scream terrifically, and, soon after, nearly one point of water passed from the bowels, with only a very small quantity of fæcal matter. The child continued to worry, seemed to be in pain, and a small dose of paregoric was administered, and sixteen hours after the injection a physician was called, when the temperature of the child was found to be 105½° F., and the abdomen was distended and tender. Peritonitis was diagnosticated, and one drop of U. S. solution of morphia ordered every half-hour until the pain was relieved. The morphia was afterwards given in doses of the same size every hour. The child was kept under its influence a little more than a week, the bowels in the meantime not moving at all. The temperature fell, and the child was apparently on the way to complete recovery.

One point of interest in the case was that a pint of water could be thrown into the rectum of a child *six weeks* old.

ACQUIRED SYPHILIS OCCURRING IN A YOUNG CHILD—QUESTION WITH REFERENCE TO TRANSMISSION OF THE DISEASE THROUGH THE MOTHER'S MILK.

Dr. L. D. Bulkley referred to a case of syphilis which contained certain points of interest. The patient was a girl, 9 years of age, who came under his observation at Demilt Dispensary. She was in rather poor health, and her mother came with her to consult the doctor with reference to an abscess situated at the upper and inner aspect of the right tibia. The swelling was about two inches in diameter. Upon closer examination it was found to be a softened node. A very large, tender node was also found upon the left tibia. The teeth, however, were perfect. There was no evidence of keratitis, either past or present, nor did the forehead present any of the characteristics of hereditary syphilis. The duration of the swelling upon the legs had been about two years. On further inquiry, it was found that the child had a slight, general eruption over the upper part of the body when *eleven* months old, and a marked eruption upon the lower extremities when three years of age. The father of the child died when it was six months old. There was no evidence that he had had syphilis. The mother gave no evidence of syphilis existing during the lifetime of her husband. Soon after the death of her husband she took a strange child to nurse, and gave it her left breast. Her own child suckled her right breast. The strange child had what was thought to be a simple stomatitis, and, after nursing two days and nights, was removed entirely. Her own child was then given both breasts. About three weeks from the time she first saw the strange child, the left nipple became *sore*, and there soon followed a papular eruption upon the body, to which were added more or less of the developments of syphilis. The question then arose, how did her own baby get syphilis? The mother recollected distinctly that at no time did her child have a sore about the mouth, or any portion of the mucous membranes. The conclusion then might be reached that the child acquired syphilis through its mother's milk, but Dr. Bulkley was not willing to accept such conclusion without closer investigation with reference to the existence of a primarily local lesion.

Dr. Purple asked if it was settled that syphilis could not be communicated except through a primary lesion or chancre.

Dr. Bulkley replied it had been well established by Fournier that acquired syphilis *always* originated in chancre.

Dr. Purple inclined to the opinion that such a view was more theoretical than practical, and referred to cases, one in particular, in which a gentleman who had secondary syphilis gave the disease to his wife, and upon the most careful examination no primary lesion was found either in the mouth or in the vagina.

Dr. Ward suggested that a primary lesion might have been present in the mouth in Dr. Bulkley's case,

but that it was less marked than usual on account of the age of the child; hence, might easily have escaped observation.

Dr. Bulkley remarked that he had never seen a chancre in the mouth of a child so young, yet he was inclined to believe that a local lesion was developed and passed unrecognized, rather than that the syphilis was acquired through the milk of the mother.

Dr. Ward referred to a case in which the child was delivered perfectly free from any appearance of syphilis; the mother also was free from the disease. About two months after the birth of the child, the father contracted a chancre, and communicated the disease to his wife. The mother nursed the child for two weeks thereafter, and also passed through the periods of syphilis, but the child at the end of fourteen months had not shown any evidence that it had taken the disease.

Dr. Katzenbach referred to a case as follows: A syphilitic mother gave birth to a child which died of syphilis at the age of eight months. She subsequently had three miscarriages. She had mucous patches in her mouth, suffered from headache and well-marked alopecia, at the time she came under the doctor's observation, and was also in the third month of another pregnancy. A mercurial plan of treatment was at once instituted, consisting of the use of one grain of blue-mass combined with iron three times a day, and continued *up to the time of delivery*. The child was born at full term. The mother had mucous patches in her mouth, nursed her child, and yet at the end of six months there was no evidence whatever that the baby had acquired syphilis.

Dr. Katzenbach also referred to a case in which active delirium, with only a moderate elevation of temperature, was developed in consequence of excessive brain-work, associated with unsuitable physical nourishment. The patient was a college student, who lived poorly while passing through the cramming process preparatory to examination. The temperature was reduced by continuous cold sponging. Sleep was induced by full doses of opium.

The Section then adjourned.

Correspondence.

HOMŒOPATHY AND EXCLUSIVENESS.

To the Editor of The Medical Record:

Sir:—"Senex" is right in remarking that my letter "is somewhat peculiar," for it has served its object by drawing his fire. That it "suggests to the attentive reader the idea that its writer is but partially acquainted with the facts" remains to be proven—and, "or else is not writing in good faith," is a groundless assumption and unworthy of refutation.

Next my critic says: "His first error is the statement that 'the morbidly conscientious querist might with equal plausibility, under its soothing influence, consult with eclectics.' A reference to the Report of the Comitia (Med. Rec.) will show that the eclectics are exclusives, insomuch as they exclude by public declaration certain drugs and methods of treatment." He is undoubtedly correct in the abstract, but not in fact; for the Report, incomplete and evasive by not being strictly responsive, would enable "the morbidly conscientious querist" to declare the Code "null and void," as regards any eclectic who on his *ipse dixit* pronounced himself no longer an exclusive. Such, at all events, would be the effects of your construction of the Report and of its action on the Code as regards liberal homœopaths. (Med. Rec., Aug. 10, Sept. 7.) Therefore, if applicable to one set of exclusives, it is equally applicable to another set of exclusives, at least with recanting ones of any sect: thus enabling "Senex," "the morbidly conscientious querist" and "qualms of conscience" to practise "*in dubiis libertas*" *ad libitum*.

Then that "Senex" is either unfamiliar with, or else ignores the definition of empiricism, as contained in Webster, is self-evident. The latter says empiricism is, "*A practice of medicine founded on experience, and neglecting the aid of science; ignorant and unscientific practice;* charlatanry; quackery." The practice of the present day is founded upon a knowledge of disease and of the physiological action of remedial agents, and, subserviently, clinical experience. At all events, such is the practice of all progressists—*Non progredi est regredi*. "Senex" claims that the practice of the majority of the profession, including "Senex" himself, is "a practice founded upon experience only, without the aid of a general theory," and says it "is certainly empirical." The error of this plausible assertion is due to the ambiguity of the term; neither "Senex" himself nor any "physician in good standing" would consider it complimentary to be styled an "empiric." Consequently his statement, if Webster is not in error, that, "conversely, the practice of homœopaths is not empiricism, for they claim to possess a general guide capable of indicating the appropriate treatment in cases where experience is silent," is not worthy of a moment's serious consideration; for the guide, or rather doctrine, of *similia similibus curantur* has long since been considered and proved as a rule to be a *fallacy*.

For his second signification, he quotes the Code of Ethics (Sec. 3., Art. I., Chap. II.), which does not apply to the case, as it only refers to "the ordinary practices of empirics, and are highly reprehensible in a regular physician." But Webster defines an empiric as "*one who confines himself to applying the results of his own observation; wanting science;* an ignorant, unlicensed practitioner; a quack; a charlatan." Therefore the homœopath *per se* is an empiric as regards his practice of the art of medicine, as he only treats the symptoms of disease on the principle of "a dog's hair cures a dog's bite." My learned critic should not confound quackery and charlatanry with empiricism; the former is vulgar, the latter refined, moral, and can be practised "in good standing."

I trust that "Senex" will now be able to clearly understand my writings without my having had recourse to a "private definition" or one as novel and clever as his.

As regards "exclusivism," "Senex" agrees with me as to the forfeiture of professional standing, etc. For its definition, pardon me, if, without a quotation, I again refer him to Webster—and, for its applicability to the present issues, I accept the definition of exclusives embodied in the Report of the Comitia. Had my learned critic read me attentively and critically, he would have found that I did not object to the Report of the Comitia as regards the so-called liberal homœopaths, except wherein it had not gone far enough, for I would *have requested them to present their credentials "for further action" (consideration), and, if found satisfactory, have recognized and admitted them as regulars*. Moreover, as previously stated, the Report was not responsive, but evasive, and entirely foreign to the point raised by "the Morbidly Conscientious Querist," and the Comitia, by practically ig-

noring his question, in your own words, "evinced a disposition to dodge a plain duty;" and I did object to the construction put upon it in the editorial of the RECORD of August 10th, and of its assumed effect in the Code, also insidiously sustained by "Senex"—*i. e.*, that the Code became "null and void as regards consultations with the so-called liberal homœopaths," who either never had a status as regulars, or else had forfeited all right and title thereto by practising empiricism.

Then, turning from these points, "Senex" comes "to another which 'Medical Ethics' apparently deems of special importance, as he has placed it in italics." In discussing this proposed amendment, "or one of a similar nature," as suggested by me, he says substantially that I "open the doors to consultations with eclectics and to all homœopaths." This assertion is based on the construction it pleases him to place on the first sentence of my proposed amendment. I admit of its ambiguity—indefiniteness, if it is more gratifying to him; but its intent was, as indicated in the paragraph immediately preceding the proposed amendment, "*a county medical society*" under the control of the Medical Society of the State of New York, and his quibble or technicality, although well taken, falls to the ground by substituting "*The Medical Society of any County.*"

Again coming to the charge, he says: "We find that the amendment, if adopted, would exclude from professional recognition at least one-third of the physicians of this county whose names are in the Medical Register, including even the President of the Academy of Medicine. Can it be that 'Medical Ethics' honestly proposes such a measure? Or has he been a little careless in the statement of his views?" My learned Querist is evidently as unacquainted with "the fundamental laws" of the State regarding physicians as he is unfamiliar with Webster's definition of empiricism, else he would not have propounded such a question. I will quote the essential ones for his benefit, as well as others who may hold similar views: Revised Statutes, Sixth Ed., Part I., Chap. XIV., Title VII., Sec. I.: "The president of every county medical society shall give notice in writing to every physician and surgeon not already admitted into such society, within the county in which the society of which he is president is situated, requiring such physician or surgeon, within sixty days after the service of such notice, to apply for and receive a certificate of admission as a member of such society."

"Section 2. The service of every such notice shall be made personally on the physician or surgeon to whom it shall be directed; and if such physician or surgeon shall not, within the time specified in the notice, or such further time as may be allowed by the president under the regulations of such society, apply for a certificate of membership in such society, his license shall be forfeited, and he shall be subject thereafter to all the provisions and penalties of the law of the State in relation to unlicensed physicians, until, upon a special application, he shall be admitted a member of the medical society of the county in which he shall reside."

The above is a part of the law of the land, and "the President of the Academy of Medicine and the one-third of the physicians of this county whose names are in the Medical Register" are no more entitled to exemption from its provisions than the greatest outlaw, unless their diplomas or licenses antedate the above enactment, which would then be as regards them an *ex-post facto* law. It is true this law has been and is—possibly through motives of policy—a mistaken one, I believe, practically a dead one. As the "empiric homœopaths and eclectics" have each incorporated societies of their own, the motives of policy no longer exist. Therefore, as long as this law stands unrepealed, the presidents of the various county medical societies, by not meeting its requirements, fail in their duty.

Then Chapter XVIII., T. 13, Art. I., Sec. 36., provides for the establishment, rules, etc.; and Section 37 empowers any medical society of the county entitled to representation in any medical society of the State and in the homœopathic medical society to discipline its members: provided such action receives the sanction of the State medical society representing such county medical society, and is not inconsistent with the laws of the State.

The State Medical Society proper has adopted the Code and certain by-laws for the discipline of its members, as well as those of the subservient county medical societies. I feel convinced that by enforcing them, as well as the laws extant, we will elevate the professional standard, and at the same time more readily practise as well as preach the trite quotation: "*In certis veritas, in dubiis libertas, et in omnibus charitas.*" For "*In dubiis libertas,*" as applied by "Senex," would throw open the doors to *false pretences.*

In conclusion, your charge of "ventilating prejudices" in the editorial of September 7th, and the insinuation by "Senex" of "sectarianism and of attempting to restrict liberty of thought and freedom of practice by educated men," are "curses" in no way applicable to me. In all my communications I have had but one object in view—a wise and judicious liberality, founded on law, and a thoughtful consideration for the welfare of our profession.

Yours truly, MEDICAL ETHICS.

HOMŒOPATHY AND EXCLUSIVENESS.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR:—The editorial of THE MEDICAL RECORD (vol. xiv., p. 111) on the above-mentioned subject, and the subsequent criticism by "Medical Ethics" and consequent editorial (vol. xiv., pp. 191, 192), discuss questions of great interest to the profession.

The gist of the case thus presents itself in your first editorial: "It appears that *one* of the members of the *society* requested the *Comitia* to *inform him* officially *whether* the recent *action* of the *Homœopathic* Medical *Society* of the State of New York *released* its *members* from the *ban* of *exclusiveness* as regards *consultations*, which has *heretofore* been *placed* upon *them* by the *profession.*"

The *Comitia* utterly *failed* to give a direct *reply thereto.* It very guardedly stated that "the only exclusives known to the Comitia Minora are a minority of the Homœopathic Medical Society of the County and the Eclectic Medical Society of the County, &c." The committee, in fact—making use of your own expression—"evinced a disposition to dodge a plain duty" by begging the question. The majority of the society saw the loop-hole liable to be seized by the "Querist," and very properly rejected the Report which, to say the least, was not responsive, but evasive. That there was such an opening left is shown by your first claiming and then reaffirming, in your editorials, that the third—a concluding and merely explanatory sentence—would vitiate an entire section of the Code. On the *ipse dixit* of an impurged exclusivist who, if formerly a "regular," "does," according to your own admission, "unquestionably forfeit his

professional standing by practising empiricism and exclusiveness," and it is thus utterly impossible for him to have, as claimed by you, "a good moral and *professional standing*," at all events within the meaning of the Code. Such a one is, therefore, even less worthy of recognition than the "licentiate" of a homœopathic school—*de bene esse*.

Your remarks as to prejudice having been evinced in the matter by the majority of the society and "Medical Ethics" are unfair. For every enlightened practitioner — if not in name, in fact — makes use of triturations more or less infinitesimal, and knows that there is, or may be, a difference of opinion as to the *modus operandi* of remedial agents; thus, the exclusivists give veratrum album in diarrhœal diseases on the principle of *similia similibus curantur*, while the scientist, if he chooses to employ it, gives the agent with a view of arresting an active hyperæmia by inducing a passive one—in other words, by causing a vaso-motor paralysis of the intestinal tract. Such a difference of opinion is passed over with a shrug of the shoulder, for some "regulars" practise empirically (clinically), and others scientifically. The "majority" and "Medical Ethics" contend that every practitioner shall sail under the colors he or she may select, but not use one which may be chameleonized to suit the individual notions and prejudices of the public at large.

It is a well-known fact that certain specialists have for some years past urged the removal of the ban from exclusivists, and the recent action of the Homœopathic Society has rekindled their ardor, by stirring up, as rather ironically stated by "Medical Ethics," their "*qualms of conscience*."

Every lover of his profession believes in liberalism; moreover the tendency of the age, in sciences, religion, and politics, favors it; but it requires normal restraint; and even communism, with its boundless liberalism, has found it necessary to hold its votaries within bounds. Therefore, if the latter had to succumb to the inevitable law of restraint, a profession—the learned professions—must, *a fortiori*, recognize its force. Hence the section of the Code referred to—in its entirety, unmutilated—meets the requirements of the case.

Yours truly,

ONE OF THE MAJORITY.

SEPTEMBER 18, 1878.

ETHER AND CHLOROFORM IN PUERPERAL CONVULSIONS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—Supplementary to what I said in your issue of Sept 14th, on the anæsthetic treatment of puerperal convulsions, I wish to put on record the following testimonials:

Dr. John Crowell, Haverhill, Mass., in a letter to me, dated September 13, 1878:

"Judging from my own experience, many more patients are saved by anæsthesia than by the old methods adopted in my early practice."

Dr. G. W. Garland, Lawrence, Mass., writes that he considers "the anæsthetic treatment as invaluable, and cannot be dispensed with." He has, however, never treated a case without other remedies.

From Dr. Enoch Cross, the oldest physician in Newburyport, now nearing his eighth decade:

"I have had experience in all kinds of treatment of that dire disease. In my earlier years I used to witness disastrous results, but since I have trusted to ether, have had uniform success."

Dr. F. A. Howe, Newburyport: "Full and continuous anæsthesia alone can be relied on in urgent cases." Dr. Howe, who has had many cases, trusts mainly to ether, or if he could not obtain ether, would use chloroform. He also uses, as adjuncts, chloral hydrate and the bromides.

Dr. J. A. Douglass, of Amesbury, claims good results from veratrum in large doses.

From Dr. Gilman Kimball, of Lowell, letter bearing date Sept. 13th:

"I have seen but one case treated with ether, and that seemed to show its good effects."

Dr. H. J. Cushing, of Merrimac, reports five cases. Two of them were fatal. In one no ether was used, and in the other it does not seem to have been administered perseveringly. In the three cases that recovered ether was freely used.

Dr. S. H. Potter, Hamilton, Ohio. Dr. P. is an eclectic of repute in the West. (From a letter dated the 14th inst.):

"I employ chloroform and ether, of each equal parts, by inhalation, in the treatment of puerperal convulsions, and venesection, too, if the patient be plethoric. Chloroform is as safe as ether, and more prompt. I use these remedies in all cases in the abovementioned proportions."

Dr. W. H. Kimball, of Andover, Mass. Dr. K. is President of our Essex North Medical Society. (Letter dated the 17th inst.):

"Have chiefly relied on inhalation of ether in treatment of puerperal convulsions for many years. I have more faith in this course than in any other."

From Dr. F. D. Gilbert, Sherbrooke, Province of Quebec. (Letter of recent date):

"You misunderstood my remarks, as I could not have stated that I lost a considerable proportion of my cases prior to using anæsthetics, as I never lost a case in my life where I was the first attendant. The substance of my remarks consisted in the statement of my belief that the cause of the disease was a reflex excitability of the spinal cord (the brain not being primarily affected), which abnormal excitement I had always been able to control by means of chloroform. This new remedy, I believe, I was the first, at all events in this country, to use in these cases, in face of very serious opposition."

This last communication demands a word of explanation. I gave, as well as my memory would serve me, a faithful report, after the lapse of ten years, of Dr. Gilbert's remarks at the meeting aforesaid. I had often pondered on them, and in my subsequent cases of puerperal eclampsia, had acted in accordance with his suggestions. And yet—alas! for the treacherousness of human memory! Alas! for the fallibility of human testimony! Here is a case that would delight our friend, Dr. Beard, who has taught us lately, by numerous illustrations of a like nature, of how little scientific value are such histories (say), as Gibbon's "Decline and Fall of the Roman Empire." (See Dr. Beard's articles in vol. xii. of the *Popular Science Monthly*.)* If *I*, with a fair average memory, could not report correctly a short address which I heard ten years ago, on whom but a stenographer could we rely to reproduce any man's words, however impressive at the time, after a score or two of years had rolled around?

Several gentlemen who have written to me, have spoken about "apoplectic," "congestive," "hysteric" forms of puerperal convulsions; indications being furnished for treatment in accordance with these forms. Now, I believe this is puzzling one's self to little ac-

* "On the Scientific Value of Human Testimony."

count. Hysteria may, of course, complicate the pregnant or parturient state, but this is not the dire disease we have been considering, which is, according to the best authorities, an albuminuric or toxæmic eclampsia. In fact, till we have more positive data to the contrary, I think we are warranted in saying with Cazeaux: "Toutes les éclamptiques sont albuminuriques."

It is, moreover, indisputable that cerebral congestion, apoplexy, and coma, may be a natural consequence of the violence and persistence of the convulsions, just as such results sometimes follow an epileptic seizure. Being effects, it is insane to treat these conditions as though they were the cause of the convulsions. Abolish, by your anæsthetic, the spinal erethism which provokes the disorderly manifestations, and the plethora *basis cranii* will disappear.

The literature of the subject includes, among other references, the following: *Lond. Med. Gaz.*, 1848, p. 235; *Bull. de Thérap.*, Jan., 1849, p. 27; *Am. Jour. Med. Sciences*, July, 1853, p. 283; *Bost. Med. and Surg. Jour.*, vol. 51, p. 53; vol. 53, p. 286; vol. 93, p. 191; *Edin. Med. Jour.*, vol. ii., p. 1123; *Braith. Ret.*, parts 62, p. 328; 64, p. 211; 68, p. 222; 70, p. 240.

E. P. HURD, M.D.

NEWBURYPORT, MASS.

RARE CONGENITAL MALFORMATION OF HIPS.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR:—Recently a patient with a peculiar malformation came to the surgical department of the Long Island College Dispensary. The condition being such as I had never met, or read of, leads me to send you the following brief sketch:

H. McG.; age, five years six months; native of the United States; family history is excellent. Patient's health has always been good, except during dentition, when, for about two months, he suffered from a slight gastro intestinal irritation. Now is plump and well nourished. Muscles are well developed and firm. Never had any fall or injury, and never complained of any pain or tenderness in back or limbs. Commenced to walk at the age of fourteen or fifteen months, when it was observed he had a "rolling gait," with a forward arching of the spine, and a prominent abdomen. Previous to this the mother and friends never noticed anything abnormal.

When the child stands, there is an apparent anterior curvature of the spine at the junction of the last lumbar vertebra with the sacrum, the pelvis being tilted forward. This curvature disappears as he is lifted from the floor, or allowed to lie upon his face or back. No point of tenderness or irregularity can be detected along the spine. Measurement of the lower limbs discovers practically no difference, the left being one-eighth of an inch the longer. If a line be drawn from the tuberosity of the ischium to the anterior superior spine of the ilium, the great trochanter, of each femur, is about one and three-fourths inches above it. In other words, the heads of the bones are thrown upward and backward upon the dorsum, as in dislocation. Above and behind the great trochanter a slight groove seems to constitute the only neck of the femur, the head and trochanter being, as it were, fused together. The axes of the limbs are normal. On inverting the limb, and manipulating as for reduction of a dislocation upon the dorsum, the head of the bone can be brought nearly to the position it should occupy normally, but muscular contraction immediately draws it into its former position.

Fixing the pelvis, and grasping the femur at its lower end, the head of the bone can be moved up and down, giving a slight bony roughness. Probably there is no acetabulum. The heads of the bones seem to be enclosed in muscular or fibrous sockets. Standing the child upon his feet, the weight of the body forces the heads upward and backward, allowing the pelvis to tilt, and thus giving the appearance of curvature. If the limb is allowed to hang, its weight draws the head down. Locomotion is not much impeded. Nothing points to any disease of the region. Shall we call the condition A Double Congenital Dislocation upon the Dorsum Ilii? If objected that a bone cannot be dislocated from a position it never occupied, we must content ourselves with A Case of Rare Malformation.

Respectfully,

FRANK E. WEST, M.D.

24 CLINTON STREET, BROOKLYN, Aug. 2, 1878.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 15 *to September* 21, 1878.

GREENLEAF, C. R., Major and Surgeon. On return to winter quarters of troops now on the Marias River, assigned to duty as Post Surgeon at Fort Shaw, Mont. T. S. O. 108, Dept. of Dakota, Sept. 16, 1878.

HORTON, S. M., Major and Surgeon. Granted leave of absence for twenty days on Surgeon's certificate of disability. S. O. 168, Dept. of the East, Sept. 17, 1878.

HUBBARD, V. B., Capt. and Asst. Surgeon. Assigned to duty at Angel Island, California. S. O. 138, Div. of the Pacific and Dept. of California, Sept. 10, 1878.

FITZGERALD, J. A., Capt. and Asst. Surgeon. When relieved to comply with S. O. 176, C. S., in his case. S. O. 108, Dept. of the Columbia, Sept. 2, 1878.

HALL, WM. R., 1st Lieut. and Asst. Surgeon. Assigned to duty at Ft. Boise, Idaho, relieving Asst. Surgeon Fitzgerald. S. O. 108, C. S., Dept. of the Columbia.

CUNNINGHAM, T. A., 1st Lieut. and Asst. Surgeon. Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 106, Dept. of Dakota, Sept. 10, 1878.

YELLOW FEVER.—A violent epidemic of yellow fever has broken out along the coast of Senegal, especially in the towns of Gorée, Rufisque, and Dakar. The epidemic is the most severe that has raged there since 1867. One of its first victims was the young and promising physician, Dr. Bellom. The disease has not yet made its appearance in St. Louis, the chief town of the country, which has so far been protected by a vigorous quarantine.

DR. HERMANN LEBERT, of Vevay, died suddenly in Switzerland, on August 1st. He was born in Breslau, and at the time of his death was 66 years of age. From 1852 to 1859 he was Professor of Medicine in the University of Zurich, and from 1859 to 1873 held the same chair in the University of Breslau. In 1876 he resigned his professorship on the score of ill-health, and since then has practised medicine in Vevay. He was the author of several valuable works that have secured for his name an honorable place in the galaxy of medical celebrities.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 21, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Sept. 14, 1878.	0	18	34	1	1	16	0	0
Sept. 21, 1878.	0	29*	25	3	6	24	0	1

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE, WASHINGTON, D. C., Sept. 21, 1878.

NATIONAL QUARANTINE REPORT. — Abstract of Sanitary Reports received during the past week under the National Quarantine Act:

Vicksburg.—Epidemic abating. There were 121 deaths during the week ending yesterday evening; a decrease of 113 deaths from the week before. Eleven deaths occurred in the last twenty-four hours. Total deaths to date, 721.

New Orleans.—During the week ending yesterday noon there were 1,401 cases of yellow fever and 445 deaths, a decrease of 172 cases and 85 deaths as compared with previous week. In the last twenty-four hours reported there were 165 cases and 69 deaths. Total cases, 7,538; deaths, 2,368.

Baton Rouge, La.—The first case of yellow fever reported to the Board of Health occurred on the 14th of August. A previous case, not reported to the Board, but thought to have been yellow fever, occurred August 10th. First death August 18th. To 9 A.M. yesterday there had been 672 cases and 39 deaths.

Morgan City, La.—During the week ending yesterday evening there were 41 cases of yellow fever and 10 deaths, making in all 66 cases and 18 deaths.

Mobile, Ala.—Four cases of yellow fever and two deaths occurred during the past week, making in all six cases and four deaths.

Grenada, Miss.—For the week ending yesterday evening there were 20 new cases and 37 deaths. Total deaths to date, 271. No decrease in virulence of the fever. Dr. Henry Stone, of Natchez, is the only physician on duty.

Pass Christian, Miss.—From Sept. 9th to 20th, A.M., there were six new cases of yellow fever, and no deaths. Total cases, 21; death, 1.

Beloxi, Miss.—Twenty cases of yellow fever, and seven deaths have occurred to Sept. 20th.

Ocean Springs, Miss.—There were fourteen cases of yellow fever and three deaths for the week ending yesterday evening. Total cases, 51; deaths, 12.

Memphis.—620 deaths from yellow fever occurred during the week ending Thursday evening, Sept. 19th, making a total of 2,131 deaths. The number of cases not known to Memphis Board of Health.

Brownsville, Tenn.—During the week ending yesterday evening there were 100 new cases of yellow fever and 15 deaths, making in all 130 cases and 44 deaths. The deaths for the week ending Sept. 14th were 29, instead of 9, as stated in last report.

Hickman, Ky.—Forty-two deaths from yellow fever occurred during the week ending yesterday evening. Sixteen new cases and three deaths during the last twenty-four hours. Total cases to date, 205; deaths, 74.

St. Louis.—During the past week there were six deaths from yellow fever, four of which were at quarantine. All refugees.

Louisville.—Eighteen cases of yellow fever and eight deaths for the week ending yesterday evening. Total cases, 77; total deaths, 26. All refugees.

Cincinnati.—Five cases of yellow fever and one death during the week ending yesterday evening. All refugees. Total cases, 30; deaths, 13.

Gallipolis, Ohio.—Since the last report, to Sept. 18th, there was one new case of yellow fever and three deaths, making in all 28 cases and 12 deaths, all traceable to the infected steamer John D. Porter.

Indianapolis, Ind.—One refugee died of yellow fever Sept. 17th.

Bay St. Louis, Miss.—Fifteen cases of yellow fever occurred during the last week. Deaths not reported.

Cairo, Ill.—Three new cases of yellow fever since last report. Two died in Cairo and one went to Mound City, eight miles from Cairo, and died there.

Havana.—Fifty deaths from yellow fever and four from small-pox during the week ending Sept. 14th.

Key West, Fla.—Six cases of yellow fever and five deaths during past week.

Morocco, Africa.—Asiatic cholera has appeared in the cities of Mequinez and Fez, Morocco, causing the death of from twenty to thirty victims daily in the former city, which is about 170 miles from Tangier. Information of the disease came to Felix A. Mathews, Consul of the United States at Tangier; and, in his capacity as President of the Board of Health of Morocco, he dispatched Dr. Tadeo Martinez, formerly of the Spanish Navy, to visit Fez and Mequinez. Dr. Martinez left Tangier August 7th with an escort of 200 Moorish troops, and, after forcing his way through the lines of revolutionists besieging Mequinez, entered that city on the 14th of August, where he found the disease to possess all the well-known characteristics of Asiatic cholera. From a report obtained from the custodian of the Jewish Cemetery, the number of deaths of the Israelites since the first appearance of the disease exceeded 400. The disease was reported to have spread to Sherarda, a province bordering on the city of Mequinez. Dr. Martinez attributes the disease to the unsanitary condition of the city, but Consul Mathews suggests the possibility of the germs of disease having been brought by the thousands of pilgrims returning from Mecca. The unsanitary condition of the crowded cities of Fez and Mequinez is described as "entire want of precautionary measures of cleanliness within and without the houses. In some quarters offal, filth, dead animals, and dirt of all kinds and origin are allowed to accumulate from year to year until they reach the level of the windows, creating inexpressibly repugnant exhalations of the most deadly and life-destroying miasm." The port of Tangier and its environs are free from any infectious disease.

Calcutta.—Nine deaths from cholera, week ending July 20th.

Bombay.—Thirty deaths from cholera, week ending July 30th.

JOHN M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

DR. CARL SACHS, Assistant in the Pathological Institute of Professor Du Bois-Reymond, in Berlin, lost his life recently on Monte Cevedale, in the Tyrol. In company with Dr. George Salomon, assistant to Frerich's Clinic, in Berlin, and a Herr Heinitz, a

* Nine cases reported from institution at No. 155 Worth Street.

merchant of that city, he started out for a walk, probably without a guide, and but one of the party returned alive. Dr. Sach's body has not yet been found, but that of Herr Heinitz was found in a terribly mangled condition. Dr. Salomon fortunately escaped with a severe double fracture of the leg. In July, another Berlin physician, Dr. Tunkel, met with a severe accident on Mont Blanc, but was fortunate enough to escape with life.

PATHOLOGY AND TREATMENT OF EPILEPSY.—Dr. E. C. Seguin will deliver, during the months of October and November, a series of six lectures upon the "Pathology and Treatment of Epilepsy," at the College of Physicians and Surgeons, on Thursday afternoons, at four o clock P.M., commencing on Thursday, October 3d.

GALVANIC TREATMENT OF THE ULCERATED OS UTERI, AND VAGINAL LEUCORRHŒA. — Dr. O. E. Herrick, Greenville, Mich., writes: "While reading Dr. Chas. K. Mills' clinical lecture on the Treatment of Bed-sores and Ulcers by Galvanism, reported for the *Medical and Surgical Reporter* and reprinted in the *Michigan Medical News*, it occurred to me that a similar plan might be pursued in the treatment of ulceration of the os uteri. Having a patient who had been suffering with a prolapsed and ulcerated uterus for a long time, and to whom I had applied one of the 'silver wire and soft rubber pessaries' (described by me in the RECORD of July 6th), I conceived the idea of profiting by the silver wire stem to get up a galvanic current; accordingly I proceeded to effect my purpose in the following manner: by making a little bag about two inches long by one inch wide, of chamois skin, and fastening it to the front of the belt used to sustain the pessary in position. I then cut a piece of zinc about one inch square, perforated it, and attached a small copper wire, the other end of which I attached to the protruding end of the silver wire pessary. I then put the piece of zinc with the wire attached into the chamois-skin bag, into which had already been placed a piece of sponge moistened with vinegar, thus having the zinc, copper wire, and silver galvanic apparatus of Dr. Mills applied to ulceration in *another* location.

"I had had the patient under treatment for about ten days previous to making the above application, had given the usual treatment of injections, unguents, etc., without any perceptible change in the ulceration or leucorrhœa. And the only way my patient had improved was that the instrument had kept the uterus in its proper position. In thirty-six hours after the galvanic attachment was made I examined the patient and found healthy granulations instead of the unhealthy ulcer, without any evidence of granulations as it had existed before; I also found that the leucorrhœa had stopped almost entirely, a circumstance which the patient stated had not taken place for a year before. In one week there was neither ulceration nor leucorrhœa, at which time I removed the copper wire and zinc, but left the uterine supporter on a week longer, to make sure the uterus would remain in place. I then removed it, and discharged my patient well, and she remains so up to this writing, three weeks since the removal of the apparatus. I have two more cases that I am treating in the same manner, one with ulceration and the other with an old and obstinate leucorrhœa. They are both doing as well as one could desire."

HOW WE TREAT OUR BRAINS.—Almost daily I am in contention with parents and guardians, schoolmasters and school-mistresses, clergymen and professors, youths and maidens, boys and girls, concerning the right way of building up the young brain, of ripening the adult brain, and of preserving the brain in age. Grievously ill do we take in hand to deal with this delicate member, and well is it that innate development overruns our schemes and brings the variety of natural good out of the monotony of human folly. It is dimly felt by society that the reign of bone and muscle is over, and that the reign of brain and nerve is taking its place. Even the Gibeonites now have the hydraulic ram and the steam felling-machine; the spectacled general of forces fights in his tent by click of battery and wire, and his lieutenant hoists an iron-clad by the touch of two buttons upon his waistcoat; the patient earth forgets the tread of horse and ox, and is ploughed by steam; and ere long, no doubt, our ministers will wind sermons out of barrel-organs, and our morning egg will be broken for us by a wafer of dynamite. Hence it comes that all classes are for "education!" The village grocer's son goes to a "theological college," and sits up by night over his "Evidences" with green tea in his blood, and a wet cloth about his brows. The gardener's daughter pulls roses no more, and has become a pupil-teacher; she is chlorotic at sixteen, and broken-spirited at twenty. The country parson's son goes to a civil service or a navy "coach," is plucked in his teens, and is left to begin life again with an exhausted brain and an incurable megrim; nay, even the sons of peers are putting on the armor of light, and are deserting the field for the counting-house. To meet this demand, colleges of all kinds and degrees spring up—middle-class seminaries, theological colleges, colleges of science, university boards—even the old universities themselves are stirring from their scholarly ease, are sending out missionaries *in partibus*, and are cramming the youth of twenty counties in the art of making most show with least learning. All this, in a way, no doubt, must be and should be; but so sudden a volte-face cannot be made without a wrench, and it is my desire now to see where the strain will tell, and how to perform our social evolution with the least injury to persons.—DR. T. C. ALLBUTT, *in Popular Science Monthly.*

AN ADVOCATE OF PURE AIR.—There are probably few persons in the community who believe Mr. George Francis Train to be the possessor of a very well-balanced intellect, however stupendous it may be in some of its capabilities; but, at all events (to use one of the not very elegant expressions of the day), his head certainly seems to be level in regard to the matter of ventilation and the virtues of fresh air. During one of his recent Sunday night "independent mass meetings" at the Broadway Theatre, he requested that all the windows might be opened, and at the same time rather startled his auditors with the following words: "I can feel the chicken-pox, measles, and all kinds of diseases coming from you. I am used to sitting in the pure air in the park, and I can smell the diseases here."

THE ROLL OF HONOR.—Additional deaths of medical men from yellow fever:

Memphis, Tenn.—Sept. 17th, Dr. John H. Erskine, Health Officer, Dr. J. G. Pennise, volunteer from Indianapolis, Ind. Sept. 18th, Dr. Hiram Pierce, volunteer from Cincinnati, O. Sept. 21st, Dr. J. G. Gorrell, volunteer from Fort Wayne, Ind. Sept. 22d, Dr. J. J. Heady, volunteer from Sherman, Texas.

Canton, Miss.—Sept. 18th, Dr. A. F. Cage.

Holly Springs, Miss.—Sept. 17th, Dr. F. M. Tennell.

Fulton, Ky.—Sept. 21st, Dr. Boaz. Sept. 24th, Dr. G. W. Kibbee, of Ohio (inventor of the fever-cot). Previously reported, 40. Total to date, 48.

Original Lectures.

THE CAUSES AND TREATMENT OF GLEET.

A CLINICAL LECTURE

DELIVERED AT THE JEFFERSON MEDICAL COLLEGE HOSPITAL,

BY SAMUEL W. GROSS, M.D.,

LECTURER ON DISEASES OF THE GENITO-URINARY APPARATUS IN JEFFERSON MEDICAL SCHOOL.

(Reported for THE MEDICAL RECORD.)

THE NATURE AND CAUSES OF GLEET.—A GLANCE AT THE ANATOMY OF THE URETHRA.—THE LOCALIZATION OF GLEET.—THE INTER-RELATION OF STRICTURE AND GLEET.—THE USE OF BULBOUS EXPLORATORY BOUGIES.—METHODS OF TREATMENT FOR GLEET.—A DILATABLE BOUGIE, DESIGNED BY DR. S. W. GROSS, FOR THE CURE OF STRICTURE.

THIS man is 34 years of age. Seven or eight years ago he had an attack of gonorrhœa, which condition was never thoroughly cured. Since that time he has had a constant discharge from the meatus urinarius of yellowish white matter. The meatus is itself slightly inflamed.

THE NATURE OF GLEET.

Last Tuesday I brought before you a case of acute gonorrhœa, and I told you upon that occasion that gonorrhœa was properly divided into three stages—inception, maturity, and decline. The last stage of gonorrhœa, that of decline, is what is commonly known as gleet. In this last stage the discharge of pus is not thick, but is at first of a muco-purulent, and then of a muco-viscid nature. I should not say that the third stage of gonorrhœa is always known as gleet, but it is so known when the muco-purulent and muco-viscid discharge continues, *i. e.*, becomes chronic. Gleet is a chronic, or subacute inflammation of the mucous membrane of the urethra. In a general way gleet is a term for any disease of the urethra.

CAUSES OF GLEET.

In some instances it may arise from non-venereal causes; this is often the case in rheumatic and gouty persons, where the discharge is set up by the contact of the acrid urine with the urethra. Gleet is a very common result of excessive venery. Again, it very frequently occurs when the passions are aroused, but the sexual appetite not gratified. Above all other causes, however, in their frequency at least, stand gonorrhœa and masturbation.

Some two years ago I wrote and published a paper on "Sexual Debility as a Result of Hyperæsthesia of the Urethra and of Stricture." Since then I have had an opportunity of examining some fifty confirmed masturbators among the patients at the Pennsylvania Insane Asylum, and in every case I found more or less gleety discharge due to the constant irritation of the sexual organs.

Gleet may depend on a diffused or limited inflammation of the urethra. The points most generally affected are the fossa navicularis and the bulb, and there is a very good reason for this. There is an immense amount of spongy tissue at the head of the penis, and this part is exceedingly vascular; such is also the case at the bulb. Hence, by reason of the great vascularity of these parts, the inflammation is localized in them.

A GLANCE AT THE ANATOMY OF THE URETHRA.

Before going any farther, however, let me briefly run over the anatomy of the urethra. There are, as you see, two dilatations in the calibre of the urethra: this one just behind the meatus, which is called the fossa navicularis, and this one at the bulb. The surface of the urethra is, as you know, dotted with follicles. Some of these are the glands of Littré, and the others the mucous glands of the urethra. On each side of the crura are the glands of Cowper, and still farther back are the ejaculatory ducts.

This body here is what is known as the veru montanum, and on each side of it are the openings of the prostatic ducts. Van Buren, of New York City, says that the veru montanum is the seat of sexual pleasure. I am inclined to relegate this feeling to the end of the penis.

The prostate gland is nothing but a muscle made up from prolongations of the muscles of the bladder. I forgot to call your attention to this little pouch in the veru montanum. It is what is known as the utriculus, and is thought by many to be a rudimentary uterus.

Just within the meatus urinarius, and opening from its upper wall, is the lacuna magna. In introducing a catheter, or urethral bougie, you are directed to carry it along the floor of the urethra. This is to prevent its falling into the lacuna magna. Should this happen it would give rise to a great deal of pain. Occasionally the opening of the lacuna magna is so far forward as to bisect the meatus urinarius, as it were, so that, in introducing the catheter, one does not know which is the proper opening. If the catheter goes into the upper one, however, it will, of course, at once be stopped.

THE LOCALIZATION OF GLEET.

In a great many cases of gleet the inflammation is localized in some one or more of the minute orifices opening into the urethra. In most cases this localization is in the lacuna magna, but in numerous instances I have traced the disease to the ducts of Cowper, the ejaculatory ducts, or the ducts opening on each side of the veru montanum. If the disease is so localized, it is, of course, very hard to get rid of it. In the lacuna magna, for instance, the only way to obliterate the virus is to slit up the lacuna with a pair of probe-pointed scissors, and then make some local application.

THE RELATION OF STRICTURE AND GLEET.

I did not mention in its proper place phimosis as a cause of gleet. It is one of the most common causes. It is also a very frequent cause of stricture, which is very rarely found to exist without an accompanying gleety discharge. By the way, I have discovered, after an extended series of investigations into this matter, that stricture is a cause of gleet in ninety out of every one hundred cases. I will venture to say, without having made any examination thus far, that this man's gleet is caused by the presence of one or more larger or smaller strictures.

The man says that seven or eight years ago he had an attack of gonorrhœa, and that the poison has never since been entirely eradicated from his system. The discharge of late has been thick and milky. When he gets up in the morning the lips of the meatus are almost always glued together by the discharge.

Let me ask him a single question. Yes; he says

that there is nearly always a retention of the last few drops of urine—he has to shake off the last few drops before he puts his penis into his pants. This is an unmistakable symptom of stricture, particularly when taken in combination with the other facts of the case. What is this retention of the last few drops of urine due to? There has been a local loss of expansibility in the muscle, due to the change which has taken place in the muscular fibres. (Each little papilla of the mucous membrane is provided with a muscle, The inflammation goes on to tissue-changes, which transform the muscular into fibrous tissues. The great bulk of the urine is, of course, expelled by the muscles of the bladder; but, for the expulsion of the last few drops, reliance is laid in health upon the contraction of the muscles of the urethra. Of course, when these muscles are changed into fibrous tissue, there is no contraction possible, and so the last drops come away by gravity alone.

Why is it that at times, as the man tells us, there is no dribbling of the last drops? When his system is in perfect health, there is no spasm of the parts, and consequently no dribbling; but no sooner does the man grow careless, go off on a "spree," perhaps, and drink quantities of ale and beer, than the same old trouble returns.

I said to you some minutes ago that I was confident that this man had a stricture. Let us see. I try a No. 24 sound, and find that it will go in with perfect ease all the way to the bladder. You smile. Why, gentlemen, a man may have a stricture if a sound as big around as your thumb goes into his bladder without resistance. The stricture is simply so large that the sound does not detect it.

THE USE OF BULBOUS EXPLORATORY BOUGIES.

To detect a large stricture, we must use an exploratory bulbous bougie. This is an olive-shaped bulb, one of whose ends is abrupt and attached to a No. 8 flexible rubber sound. The other end is sharpened to a dull point. Now, it may be quite possible for this bulb, when moving forward, to pass the stricture without giving any sign of such a passage; but when you come to withdraw this bulbous bougie, if there be any stricture, in passing over it upon its withdrawal the bulb will give a very perceptible jump. Very often it is possible to diagnose the existence and seat of a stricture upon the first introduction of this bougie, by the resistance which is offered to its progress at one or more portions of the urethra. Some have charged that a bulbous bougie gives rise to erroneous impressions. So is any other physical instrument liable to give rise to erroneous impressions. It is said that the resistance offered to the progress of the bulbous bougie may be due to spasm, whereas we may, perhaps, have diagnosed the impediment as a stricture. A distinction between spasm and stricture may be very easily drawn. If the impediment be due to spasm, passage of the bougie backward and forward several times will cause the spasm to disappear entirely. The stricture will, of course, still remain. Again, in the case of spasm, the passage of the bulbous bougie gives a sensation as of rubbing over a blunt surface. In stricture, the bougie seems to encounter a sharp, resisting body.

By the aid of this bulbous exploratory bougie I am able to discover three strictures in this man's urethra. One, half an inch within the meatus; one, one and a quarter inch within the meatus; and one, five and a half inches back. Here is a statement which I will make to you, and which you will find generally trustworthy. In nine cases out of ten, if there be found to be a stricture one-half an inch within the meatus, one or more will be found to be present farther back. I just now passed a No. 24 metallic bougie all the way into the bladder without being able to distinguish any stricture, and yet no sooner do I begin to use this No. 25 bulbous bougie than the strictures are found. Most physicians, after passing a large steel bougie into a man's bladder, and meeting with no resistance, would dismiss the case at once, and tell the patient that there was not the shadow of a stricture in his urethra. Thus it is that a great many of the larger-sized strictures are overlooked.

As I withdraw the bulbous bougie in this case, it gives a very decided little jump over the site of each of the strictures. See, too, as I bring out the instrument it is covered in places with a gleety discharge. Gleet has undoubtedly followed gonorrhœa in this case.

Before passing on, I want with the urethrometer to measure the size of this man's strictures, and also the calibre of his urethra. I find the first stricture to measure thirty-one millimetres, and the last twenty-five. The calibre of the urethra is forty millimetres, or nearly two inches in circumference. I need hardly say that this urethra is unusually large.

TREATMENT OF GLEET.

I want of course to restore the calibre of the urethra at the points of stricture, *i. e.*, to bring up the calibre of these points to forty. How am I to do it? It is hard to cure gleet. The mucous membrane of the urethra is extremely vascular, and when inflamed, as in gleet, presents the same appearance as does an inflamed cornea. The granular condition of the mucous membrane, in a great many cases of granular urethritis, is just that of the conjunctiva in granular conjunctivitis. It has a raspberry appearance.

I am employing the endoscope to see if I can discover a granulating patch at the site of the first stricture; but I find that it gives me no assistance.

I want for a moment, before proceeding to speak of treatment, to explore the lacuna magna in the upper wall of the urethra, just within the meatus, with a probe, so as to assure myself that there is no retention of the gleety discharge in that cul-de-sac. But I find, upon careful examination, that the lacuna magna is entirely normal, and contains no fluid.

Internal remedies are of little or no value in gleet. Of course, where the system is very greatly run down, it is well to put the patient upon some such preparation as the citrate of iron and quinia in ten-grain doses, or twenty drops of the tincture of the chloride of iron, two or three times a day, with two grains of quinia. If, on the other hand, the patient is plethoric, he should be given some saline and an antimonial mixture.

In treating the local symptoms, it is useless to give the patient a syringe, and let him use it himself, for the injection employed must be applied directly to the diseased spots, if any benefit is to be derived from it, and no one can so apply it but the educated surgeon. Moreover, such a kind of application should be made with a special form of instrument, so that it may reach the diseased surface, and it only. There are a vast number of syringes, etc., which have been designed for this purpose.

Some years ago I was accustomed to apply stramonium ointment and the nitrate of silver directly to the parts by means of one or other of these inventions. The application, would, of course, cause some local irritation. The patient would be dieted and sent to bed, and some demulcent drink, such as flaxseed or

slippery-elm tea, be administered. In other cases, again, I used the bulbed syringe, in which, after just passing the site of the stricture, the stream is projected backward. I have very often medicated strictures, by means of this instrument, with a strong solution of nitrate of silver, or with a mixture of cerate of opium and Goulard's extract.

Of late months I have undergone a change of opinion in the matter of the treatment of gleet. I now think that there is nothing in the world so good as the introduction of nickel-plated conical bougies and the simple overstretching of the inflamed parts.

Before proceeding to use an instrument of this sort, however, it is necessary in all cases to measure the normal calibre of the rest of the urethra, so that you may be guided in the selection of a bougie of the proper size.

But this man's urethra measures forty millimetres, and how, you will ask me, can you introduce a bougie of that girth without slitting up the meatus; and if you do slit up the meatus, how can the man project his urine with any certainty of keeping the stream clear of his clothes?

USE OF A NEW INSTRUMENT.

In cases like these I use an instrument which I have devised myself, after much thought on the subject, and which you will find described at length in a paper read before the New York Medical Journal Association, on May 24, 1878. (See MEDICAL RECORD for June 15, 1878, p. 461–2–3.) Before using this instrument, however, which was made for me by Mr. Tiemann, of New York, I divide the fibres of the two strictures, near the orifice of the urethra, with a tenotome. Such operations on the anterior portion of the urethra are very safe.

Without going into any detailed description of the above instrument, for you can easily find such a description by hunting up the reference just given, I will say that, after introducing it into the urethra, I can dilate the stricture to any desired size without affecting at all the calibre of the rest of the canal. This instrument is therefore valuable in that by means of it a stricture can be dilated without any operation upon the meatus.

To put what I say into practice, I now pass this adjustable bougie into the urethra, and by moving this screw, am able to stretch the strictured parts to the extent of forty millimetres. Of course I would not proceed so decidedly, were it not that this man has been very long accustomed to the contact of the bougie. The patient must return every two days and have this same operation repeated.

The above is my usual treatment, but in some instances I find it necessary to cut the stricture, *i. e.*, perform internal urethrotomy.

What advantage is to be derived from cutting, some of you will ask? Will there not be a cicatrix following the cut, and do not cicatrices tend to contract more and more all the time? Of course, if the sides of the cut are allowed to come together in the process of healing no good at all will have been done by the operation. The wound must be made to heal open: this is brought about by the daily passage of large bougies. In this way we will have, as it were, added to the calibre of the urethra at the point of stricture a band of mucous membrane equal in width to the combined width of the sides of the cut. Cicatrices of the derm and epiderm and of the mucous membranes of the rest of the body contract owing to the immense preponderance of fibrous tissue in their structure; but Dr. E. O. Shakespeare has discovered, in the course of some recent microscopical investigations, that three-quarters of the bulk of cicatrices of the mucous membrane of the urethra are made up of elastic fibres.

Original Communications.

CASES OF ERECTILE, FIBROID, AND OTHER TUMORS TREATED BY ELECTRICITY.

By GEORGE M. BEARD, M.D.,

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THE following cases may be used as tests by which to illustrate certain facts and principles of surgical electricity which are not always well understood, or which are oftentimes forgotten by those who are investigating this subject.

What is here said may be considered as a general answer to various inquiries that are made of me by correspondents and medical friends, and as supplementary to my remarks on this subject at the recent meetings of the American Medical and Neurological Associations.

An infant had on the forehead a nævus of about the size of a quarter of a dollar. The tumor had been treated by injections of iron without satisfactory results. Dr. Sterling placed the child fully under the influence of chloroform, and I operated with ten cells and both poles for seven minutes. After a number of weeks the child was again brought into the office; the tumor had about half disappeared. Again the infant was chloroformed, and the operation was repeated on the part remaining. The result has been entire disappearance of the tumor. The slight scar is constantly fading, and by the time the child reaches the age when it cares for personal appearance, will have mostly, if not entirely, disappeared. After neither of the operations was there any unpleasant symptom.

I may remark here that anæsthesia and electricity are in a degree antidotes to each other; the operation of electrolysis seems to be one of the best possible means of preventing any evil effects from the chloroform. Infants on whom these operations are mostly performed are, however, able to bear full anæsthesia without any bad effects; the use of electricity at the same time makes the safety absolute. On the other hand, the anæsthesia neutralizes the exciting effects of the electricity, and prevents much of the exhaustion that might follow the use of powerful currents on the sensitive nerves of the face and head. For these reasons I never operate in these cases without an anæsthetic, and as chloroform is, under these conditions, entirely safe for young children, I always have that agent at hand and some one with me to give his whole time and attention to it. I have not yet seen any facts to justify the fear, oftentimes expressed by physicians and friends of the little patients, that the chloroform may work serious, if not fatal effects. Even when no electricity is used, infants seem to bear chloroform much better than adults.

An infant under three years of age had a subcutaneous nævus in the inner angle of the left eye. It was about the size of a filbert. Here the object was to bring about a disappearance of the tumor with the least possible disfigurement; the tumor was already a disfigurement. The philosophy of electrolysis in such cases is to cause a clot to be formed in the tumor, which would be slowly absorbed by natural processes.

Suppuration was to be avoided. Accordingly weak currents and a short operation were recommended and used. As usual, full anæsthesia was produced, part of the time both poles, part of the time only the positive, being inserted. The effect was very satisfactory. After two months there was a reduction of the tumor at least one-half. After four months very little of the tumor remained, and the upper lid, which had been pressed down by the tumor, again looked almost natural. The same child had a small superficial nævus on the right side of the face, just in front of the ear. This was treated in the same way, and with satisfaction.

Cases like those above described present especial difficulties for electrical or any other treatment, because a scar is to be avoided. The same tumors on any part of the body could be removed in all cases by a single operation.

In regard to the age at which these operations can be performed with safety and success, I may say that the results are just as satisfactory with infants but a few months old as with children of several years. Where a tumor is growing, the sooner the operation is performed the better, for the scar, if any, will be less, and there will be more time for its gradual disappearance.

A child six months old was first seen by me in March, 1877. It had a nævus of the size of a large pea on the lower lid of the left eye. The family physician, Dr. Smith, gave the chloroform until the child was profoundly anæsthetized, after which I operated with four and six cells and the positive pole alone for four minutes only. The cells were quite weak; this cautious method was purposely used for the reason that it was feared that a deep and strong operation would make too much destruction of tissue. Destruction of tissue in this locality would be likely to produce a scar that would cause contraction, and so draw down the lid into permanent disfigurement. To avoid this it was thought best to operate very carefully, and, if it were necessary, to repeat the operation several times. During this short operation the color of the tumor was changed, and it was hoped that something had been accomplished, but in this respect we were disappointed, for after a month the tumor was the same as before. The operation was then repeated in the same manner, but somewhat more boldly, a stronger current being used and for a longer time. The needles were inserted more deeply into the growth.

In cases like the above, the conservative course is the wise one. There would have been no difficulty in entirely removing the tumor on the first operation, but in so doing a scar might have been made that would have been both unpleasant and unnecessary.

In the case of an interstitial fibroid of the uterus that I treated by electrolysis as long ago as 1870–71, the negative needle was introduced through the vagina directly into the tumor, while the circuit was completed by means of a sponge applied over the hypogastric region or on the lower part of the back. The instrument used was my large spear-shaped needle, designed especially for that purpose, and for working up the base. No anæsthetic was used, and no great degree of pain was experienced. The current was mild and the operation was short. These operations were repeated a number of times. When currents of much strength were used the operations were followed by more or less suppuration, which, however, did no injury. All the accompanying symptoms—the anæsthesia, the numbness, the hemorrhage—were quickly removed under this treatment. The same result by varying modes of application I have many times obtained in other cases since that time.

But I have never used strong currents or large needles through the abdomen. Small needles, however, I frequently use through the abdominal walls, and without harm; but in such operations I use mild currents and short séances.

In regard to the needles there is no question that when the abdomen is to be penetrated, they should be as small as possible consistent with the possibility of introduction. Very large needles, such as were used by Drs. Kimball and Cutler in the treatment of uterine fibroids, are liable to injure by the *mechanical* effect attending their introduction. Small needles, properly made and properly introduced, will harm almost no part of the body except the eye and similar delicate structures, where no one would think of using them. The experience of hysterical women with hundreds of wandering needles in their bodies, illustrates this fact most clearly.

Mild electrolysis does not tend to excite spreading inflammation, but the changes wrought by the electrolysis are local, and do not tend to injury of any kind. In fact, I am confident that the electrolysis constringes the blood and absorbent vessels, and so far forth is antiseptic. The fatal and otherwise unpleasant results that have, in some hands, followed these operations, are to be explained mainly by the size of the needles, and by the use of too strong currents, or too long applications. I always begin with mild currents, studying the patient, and increasing as may be indicated by the behavior of the case.

Two cases are rarely to be treated just alike in medical or in surgical electricity. I have not yet had a fatal result from any electrolytic operation, although I have operated frequently through the peritoneum, as well as in the vagina, and on the face and forehead of very young infants. Irritative fever I have several times observed, particularly in a number of operations that I undertook in co-operation with the late Dr. A. B. Crosby; but no serious effects came from this fever in any case. I attribute this good fortune to the observance of the rule here enforced—to proceed cautiously in all operations until the temperament of the patient has been studied, and his capacity for bearing electricity been fully tested.

Another very important practical fact is that the suppurating point varies in different individuals, and in the same individuals at different times. In some operations, particularly in the womb, suppuration is to be avoided unless there is a good and free vent through the vagina; and, as in some persons a short and mild operation will produce suppuration, while in others a very long and severe operation will not have that effect, it is clear that the only safe course is to begin and to feel one's way along, watching the results of preliminary, mild, tentative operations before using great strength of current.

In the treatment of nævi, where little or no suppuration is desired, the same caution is to be observed.

In operating through the abdominal walls in either sex, even moderate suppuration is to be avoided—and with just precaution it can be—and even the escape of blood is to be guarded against.

In regard to the action of electricity on tumors these points are clear:

1. The cure of nævi (mother's marks) and aneurisms, is the direct and sole result of electrolysis or electro-chemical decomposition. The electro-chemical decomposition in such cases takes place in precisely the same way that it does in similar fluids out of the body—on purely electro-chemical principles, uninfluenced by the principle or life, except so far as the blood and other fluids of the living body are warmer

than the same fluids in a dead body, and therefore better conductors.

In all these cases, whatever influence the current may have on the nerves, or on nutrition in general, has little or nothing to do with the cure.

2. The reduction or dissipation of fibroids, goitres, and hard tumors of all kinds, or in any part of the body, is accomplished not by electrolysis at all, but by the action of the electricity, direct or reflex, on nutrition, and mainly through the nervous system.*

The effect on the nerves may be both direct and indirect or reflex. In scientific language, therefore, it is an error to call the treatment of such tumors by electricity electrolysis. It is not electrolysis that causes the diminution or disappearance of such tumors. Indeed, unless the current be very strong, the amount of chemical change in such operations is almost nothing, in no way proportioned to the amount of reduction in the tumor. The rationale of the action of electrical treatment in such cases *is modification of nutrition;* this is proved in various ways.

(*a*) Without the needles at all, by mere outside applications with the sponge or cloth, important results in the treatment of tumors can sometimes be obtained; reduction and even entire disappearance of some kinds of tumors may be thus brought about. This I have proved in many cases. I frequently begin with external applications, but do not give up until I have also used the needles.

(*b*) The same results can sometimes, though not usually, be obtained in a milder degree by the *faradic* current alone, with external applications. But the faradic current has little or no electro-chemical action, and can only cause a reduction of these tumors by its mechanical action on nutrition.

In all nævi, including the three varieties—*on* the skin, *in* the skin, and *under* the skin—the needles are indispensable. In the treatment of epithelioma, also, it is useless to operate without the needles. In goitres and fibroids, something may often be accomplished by external faradization alone; although complete and satisfactory results demand usually the needles also—at least a part of the time.

(*c*) Certain tumors, as hydroceles, I have known to disappear after a single application of electricity—by means of a needle—lasting for but a second or a fraction of a minute, and before there was time for any electrolysis. The diminution or disappearance of ovarian tumors and cystics of various kinds are to be explained in the same way. In all these cases the amount of the electrolysis is always very small, and utterly disproportioned to the great change that sometimes takes place in the morbid growth. These tumors go down in a few days or hours after the operation, not as the result of any degree of electro-chemical change, but on account of the stimulation of the absorbents, and of the secreting surfaces of the nerves that nourish the tumor —in short, *by the effect of electricity on the nutrition of the parts.*

(*d*) The capriciousness and inconsistent behavior of many of these tumors under electrical treatment is only explained on this principle.

If the chemical changes were the sole cause of the results, they would be the same in all cases; there would be no caprice or inconsistency. In nævi the results do not depend, in any way, on the temperament of the patient, but only on the situation and size of the growth and its accessibility. With these qualifications, and the strength of the patient being sufficient for the operation, the results would be as uniform as in operations on inanimate substances. But when the nervous system is to be acted on, the results must vary with the temperament of the patient. Practically this is the case with tumors, fibroids, or goitres, every way similar apparently. All treated by electrolysis, no two would give the same result. Some would utterly and entirely disappear; others would go down one-quarter, or one-half, or three-quarters, while others would go down not more than a small percentage. Such for years I have found practically to be my experience with tumors of this class.

On the other hand, nævi of all kinds (if not too large), and on all classes of patients, without regard to age or temperament, can be perfectly cured by electrolysis.

I have now under treatment a lady who has on the neck a fibrous goitre of large size. The neck measured at the beginning of the treatment seventeen and one-half inches, and was a bad disfigurement. The lady had been afflicted a number of years; and already the tumor was pressing so much upon the trachea and the œsophagus that both swallowing and breathing were interfered with to an alarming extent. The patient was much troubled, especially at night. Ordinary surgery, according to the opinion of her family physician, Dr. Mason, was not to be recommended, and it was decided to make a prolonged use of electrical treatment in the various methods of application. No anæsthesia was tried; but the skin where the needles were introduced was anæsthetized by means of a mixture of carbolic acid and ether. Only the negative pole was connected with the needle, the connection being kept up by a sponge applied on the skin. In this way a current from eighteen, and even from thirty cells could be borne without serious pain. The tumor went down an inch and a half in two weeks. Even before any needles had been used, under merely external applications, all the symptoms —pressure on the trachea and œsophagus—had been removed. The patient is still under treatment. During the last few weeks injections of ergot have been combined with the electricity, and with evident good effect. There is prospect of entire or approximate cure. For an electrode I have used in her case the hypodermic syringe connected with the negative pole. The syringe is filled with the fluid extract of ergot, which is slowly injected. The needle acts upon the tissues, and makes a small cavity for its reception. This combination of electrical and hypodermic treatment is the best way yet known for the reduction of such cases.

It is a common, indeed almost universal, error to say that the rationale of electricity is not understood; that its use in medicine and surgery must be purely empirical. There was a time when this statement was true; but it is true no longer, and it has not been true for a number of years. At the present time there is probably no remedy in common use the rationale of which is, on the whole, better understood than electricity, although the facts and reasonings on the subject have not yet been diffused widely among the profession. When we use electricity for any tumor or in any nerve malady, we have, or can have, a pretty definite reason for so doing, and the reason can be stated in language by those who are familiar with the subject. Very true, we do not comprehend the ultimate mystery of its action; but we do not comprehend the ultimate mystery of anything in nature. The mystery behind electricity is no greater than the mystery that lies behind all natural phenomena. The results of electrical treatment are, it is true, modified by the temperament of the patient; but so likewise

* The only apparent exception to this statement is when suppuration is excited by the use of strong currents, and the tumor, so to speak, runs away.

are the results of all remedies whatsoever. As much uniformity attends the action of electricity as any or as most of our stimulants, sedatives, and tonics.

A CASE OF AMYLOID INFILTRATION OF THE EYELID AND ORBIT, WITH REMARKS.

By CHARLES STEDMAN BULL, A.M., M.D.,

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Read before the American Ophthalmological Society, Newport, July 25, 1878.

Amyloid infiltration and degeneration of the tissues of the lid and orbit is a very rare disease, and hence the interest which attaches to this case.

A.D., æt. 4½, born in New York of Spanish parents. The boy has never been robust and is of marked strumous diathesis. Has had frequent attacks of phlyctenula keratitis, and bears numerous cicatrices in the neck of former glandular suppuration. Has a pale, waxy complexion, feeble pulse, and is of stolid demeanor. First seen by the writer January 24, 1876. About three weeks before, the child woke up one morning with a slight redness and swelling of the outer part of the left upper lid near the orbital margin. There was no pain and no secretion from the conjunctival surface. These symptoms steadily increased until he was brought for treatment. At this date the left eye was almost completely closed by the overhanging swollen lid, and the child had lost all power over it. The skin was moderately reddened, but there were no superficial vessels visible either on the lid or vicinity of the face. The swelling was a tense, hard, uniform thickening of *all* the tissues of the lid apparently, being most marked near the outer canthus. The eyeball was markedly limited in its motility upward and outward, but moved freely in other directions. The media were clear and there was nothing abnormal in the fundus. The lid could not be everted, and the sulcus between the lid and the superior margin of the orbit was filled up by the inflammatory process, so that the finger could not be pressed in between the roof of the orbit and the eye. There was no tenderness on pressure along the orbital margin, and the child never complained of any pain. It seemed probable that this was a low grade of cellulitis of the lid and its attachments, and possibly also of the tissues of the orbit. The infiltration was limited on the temporal and nasal sides by the external and internal canthal ligaments, but spread back into the orbit. The symptoms slowly progressed to February 16th, when there was a decided increase in prominence of the upper lid, the eyeball was pushed more downward and inward, and at the same time there began to be some exophthalmus. All motion of the eye upward was lost. The palpebral and ocular conjunctiva was very much injected, and there was some muco-purulent secretion. Vision was still normal and there was no change visible in the fundus. For the last two nights the child had complained of pain in the orbit and forehead. Two days later the pre-auricular gland was noticed to be indurated and swollen, and the general condition of the child was unsatisfactory. Up to this time a simple, tonic, restorative and expectant plan of treatment had been followed out, and in addition potass. iodid. was now administered. On March 21st the symptoms were all very much increased, the exophthalmus more marked, very little motion of the eye; there was an ulcer of the cornea just above the centre, with a rather wide zone of opaque infiltration around it; the pre-auricular gland was larger, and the swelling was more pronounced along the superior orbital margin, and encroached upon the forehead. For the last few days there was a deep-seated pain in the orbit and great febrile action all through the night. It was decided to make an exploratory incision into the orbit, in hopes of finding an abscess and giving exit to the pus, the opinion being still held that it was an orbital cellulitis. After much demur the parents consented, and on March 3d the patient was etherized and an incision one and one-quarter of an inch long was made along the orbital margin from the supraorbital groove outward, and about half an inch deep. This cut was made through a very dense, unyielding tissue, and did not open into the orbital cavity, so dense was the infiltration. The incision was then deepened until the bony edge of the orbital roof could be felt, and then a straight, sharp bistoury was thrust backward for about an inch, keeping the blade well away from the eyeball. Not a drop of pus was met with, and the tissues of the orbit were found densely infiltrated and converted into a brawny mass. The hemorrhage scarcely amounted to a few drops, and came almost entirely from the vessels of the skin. A small, irregularly quadrilateral piece of brawny tissue was removed from the orbit through the incision, and when washed, was of a dirty yellow color, absolutely bloodless and very dense, like the thick rind of bacon. The immediate result of the incision was a slight diminution of the orbital tension, so that there was less complaint of pain, and the eye seemed a little more movable, but this effect was merely temporary. The pain returned and the exophthalmus seemed to increase again after the closure of the wound, which occurred on the sixth day. On March 10th, the whole cornea became hazy, the infiltration spreading from the central ulcer. The latter had not perforated, but the pupil had become contracted and could not be dilated. On the 12th, a purulent discharge began in the left ear, accompanied by severe pain in the ear and left side of the neck. The child cried almost constantly with pain in the eye and ear, had a high fever, pulse 140, and the mother said that he neither ate nor slept. On March 15th, the cornea sloughed at the centre, and the iris and lens prolapsed in the opening. It was now deemed advisable to enucleate the contents of the orbit at once, but this the parents refused to have done, and they withdrew the child from observation. It was afterwards learned that the child lived several weeks longer, became very much emaciated, and died comatose. No autopsy was allowed.

The infiltrated tissue removed from the orbit through the long exploratory incision gave the usual reaction with iodine and sulphuric acid; turning brownish red in spots on the addition of a watery solution of iodine, and changing into a dark blue, almost purple, when sulphuric acid was used.

The microscopical examination of the specimen was not entirely satisfactory, owing to the small amount of tissue at hand. After hardening in Mueller's fluid and alcohol, sections were made, which showed in some isolated spots a luxuriant granulation tissue. There were very few vessels, and in those which existed the walls were very much hypertrophied, mainly at the expense of the calibre of the vessel, which in some could scarcely be distinguished. The infiltration seemed to involve not only the coats of the vessels, but to extend for a greater or less distance into the surrounding connective tissue. This condi-

tion of the orbital tissue plainly accounted for the small amount of hemorrhage. The infiltration had involved the walls of the blood-vessels, had narrowed their calibre, and eventually obliterated the vessels altogether. There was very little trace of either connective or adipose tissue, but the main mass seemed to be a homogeneous, structureless infiltration.

From a clinical standpoint, the morbid process, without doubt, began in the orbital tissue, and probably not far from the tarsal fascia and palpebral ligaments. The infiltration spread forward into the lid and upon the forehead, as well as backward into the orbit, and the latter direction was not taken until after the disease had lasted for some time, for the exophthalmus was a comparatively late symptom. It would have been extremely interesting to have been able to follow the extension of the infiltration into the tissues of the lid, and note to what degree they were involved. Towards the last the lid felt more like a piece of sole-leather than anything else, so dense, unyielding, and homogeneous did it seem to be.

Whether the perforation of the membrana tympani with the purulent otitis media had any connection with the orbital process, it is impossible to say; but it is probable that there was some such connection. The death of the child by coma, preceded by other brain-symptoms, points almost conclusively to an extension of the orbital process backward into the cavity of the skull, and in this way the ear may have become secondarily involved. It is very unfortunate that the history of the case could not be completed by a careful autopsy.

47 East Twenty-third Street.

TWO CASES OF PERITYPHLITIC ABSCESS—OPERATION—RECOVERY.

By ALFRED NORTH, M.D.,

WATERBURY, CONN.

Case I.—Mrs. A. P., a woman of fair constitution, but of nervous temperament, was, on Nov. 6th, seized suddenly and without premonition, with a severe colicky pain in the abdomen, vomiting every fifteen or twenty minutes, her abdomen being swollen and everywhere very tender to the touch, especially so over the right iliac region. The pain not being relieved by fifteen drops of Magendie's solution of morphine (per mouth), I gave the same amount an hour afterwards by a hypodermic injection. This had the effect of relieving the paroxysm of pain for a few hours, when it returned, and the injection had again to be used. Pulse, 120; temp. 105°.

Nov. 7.—Patient has passed a restless night; pain in bowels severe, except when thoroughly under the influence of opium. Tenderness over the abdomen so great that she will not allow any examination of the bowels, however carefully made. Fulness over the right side is already beginning to be recognized. Ordered ten leeches over the ileocæcal region, and 1 gr. doses of opium to be given every hour until narcotism is obtained.

Nov. 9.—Patient expresses herself as feeling much better. While moderately under the influence of anodyne she has but little pain in the right side; the outlines of the tumor can be indistinctly recognized occupying the right iliac fossa, extending from the ant. sup. spinous process three inches inward, and about the same distance above Poupart's ligament. Dulness on percussion very marked; the point of greatest tenderness is about an inch inside of the ant. sup. spinous process.

Nov. 12.—One week from the commencement of the attack, Dr. G. L. Platt, of this city, joined me in consultation, confirming my diagnosis of ileocæcal abscess, but advising delay in operative interference, and the application of tincture of iodine over the right iliac region.

Nov. 16.—Patient's general condition improved; takes considerable nourishment; has no nausea; pulse and temperature both continue about 100; has but little pain, and that confined to one or two paroxysms in twenty-four hours; has some general swelling of abdomen, though that over iliac fossa has almost entirely disappeared. Although the tumor can be better recognized and its boundaries are apparently extending, little pain is caused by percussion and handling. She sits up an hour each day, and will not now give her consent to an operation, even of an explorative nature.

Nov. 23.—Patient's general condition for the last three days not so good. Pulse 100, temp. 101°. Complains of more pain over tumor, the deeper outlines of which can be more distinctly recognized, and are found extending inward and upward, although showing no disposition to open externally. The skin is everywhere natural in color and supple, no fluctuation present; has had no chill from the beginning. The point of greatest tenderness remaining as at first, I now insisted upon an operation, to which she finally gave her consent, and the time was appointed for the following morning.

Operation.—With the assistance of Dr. Platt, the patient was etherized, and an examination was made per vagina and rectum, which revealed nothing abnormal. There being no prominent point of the tumor to serve as an indication of the approach of pus to the surface, an aspirator needle was now put in at the point of greatest dulness and tenderness, which had remained unchanged from the first. About 2 drachms of sanious pus, having a very strong fæcal odor, was obtained after the needle had entered about two inches. I then made an incision about two inches in length along the outside of the needle, cutting down through integuments, subjacent tendinous and muscular layers until the transversalis fascia was reached. I now withdrew the needle, which had served as a guide and aspirated again, obtaining only a few drops of purulent fluid. Being so much disappointed in finding apparently a hard, unyielding tumor instead of fluctuation, and in obtaining so little pus, I did not proceed farther, but dressed the wound openly. On the following morning, finding my patient had passed a bad night, with no symptoms relieved, I opened through the transversalis fascia, enlarging the opening with an ordinary hernia-knife, which procedure was followed by a free discharge of pus. Dressed wound from the bottom with lint and a dressed cotton wick, over which was placed a poultice.

Nov. 25.—First day after operation. Patient has passed a quiet night, sleeping most of the time; complains of feeling very weak and faint; irritability of the stomach gone. She now takes nourishment of milk and beef-tea. Cavity of abscess washed out with a solution of carbolic acid, strength 1-60. On syringing out the wound there was considerable escape of gas. This was followed by fainting and temporary exhaustion. Pulse, 100; temp., 100°. General swelling of bowels subsided. Continued poultice and greased cotton-wick in the opening.

Fourth day after operation. Patient's general con-

dition continues to improve. The fainting and nausea, which lasted for several hours, and was thought to have been due to too much force being used in washing out the cavity the preceding day, has not returned. Pulse, 100; temp., 99°. Swelling and tenderness of bowels almost entirely disappeared. Has had no trouble in passing water since the operation. The use of 15 drops of Magendie's solution of morphine, once to three times in twenty-four hours, is continued. Had two small movements of the bowels to-day. Morning and evening an elastic catheter is introduced into the wound, and the cavity of the abscess gently washed out with carbolic acid solution.

Tenth day after operation. Although anæmic, her general condition much improved. Pulse, 90; temp., 99°. Sleeps without the aid of anodyne. Wound granulating, and discharge from the abscess healthy in character, and gradually diminishing in quantity. Ordered tinct. ferri. mur. 20 drops three times a day.

Dec. 16.—Midwinter. Started for Canada alone to see her parents.

CASE II.—Etta Humphrey, age 6 years, of healthy parentage. Was first seen Feb. 20, 1873. For the past two weeks patient has complained of pain over the abdomen, which was especially acute over the right iliac fossa. She states that a few days previous to the first attack, while sliding down hill, she was thrown from her sled, sustaining injuries which gave her considerable pain.

This passed off in a few hours, but soon returned, and continued to increase up to the time of my first visit. Her mother, suspecting worms from her pain and groaning during the night, had treated her accordingly. On examination I found the abdomen everywhere tender to the touch and moderately tympanitic, but especially tender and sensitive over the right iliac region, rendering a thorough examination almost impossible. Suspecting the formation of a perityphlitic abscess, I applied sixteen leeches at two different times and thoroughly fomented the bowels; this had the effect of relieving the symptoms of general peritonitis and locating the trouble in the iliac region.

On re-examination, one week from my first visit, and the twentieth day from the first commencement of the trouble, I find the little patient suffering intense pain in the right side.

Over the outer half of Poupart's ligament and near to it there is a circumscribed, deep-seated tumor, which is dull on percussion, but at no point can fluctuation be detected.

Explaining the nature of the case to the mother, and her consent being obtained, I at once proceeded to the operation.

Etherization being entrusted to my student, I made an incision parallel to Poupart's ligament, two inches in length, commencing about two fingers' width above the anterior superior spinous process of the ilium. The dissection was carefully carried down through the aponeurotic and muscular parietes until the fascia transversalis was reached. This was carefully opened with a tenotomy knife, and upon its withdrawal two ounces of pus were discharged; through this small opening the finger was introduced, the opening enlarged, and the cavity explored. No foreign body was found. Wound dressed with lint and greased cotton wick.

Second day after the operation. I found the condition of my little patient much improved. Expresses herself as feeling entirely relieved, fever and general excitement gone.

Eleventh day after operation. As the patient complained of a pricking sensation in the wound, an examination was made, leading to the discovery and removal of an ordinary brass pin. It is now supposed that this pin was very probably the origin of the trouble, having been accidentally swallowed by the patient, and become lodged in the appendix. Fourteen days after operation, the little girl was up and running around the house.

Although in Case I. the operation was delayed until the eighteenth day, I think, as a rule, we should not wait after the first week or ten days before making an exploration with the aspirator, and if pus be found, no delay should be had in operating.

In a case of a young man which came under my observation, who had been threatened with perityphlitic abscess for twelve days, in which matter was thought to be formed or forming, a delay of three days was proposed, but after waiting forty-eight hours, patient died with symptoms of acute general peritonitis following, it was thought, from perforation.

No post-mortem could be obtained.

We should not wait for fluctuation, for often that will not be recognized, even though only the transversalis fascia interpose between the accumulation and our finger.

The point of greatest tenderness and dulness is the place that should be first aspirated. This will generally be found to be within one inch of the anterior superior spinous process. If matter is not found, we should lose but little time in making a new trial rather than let our patient run the risk of perforation and death.

It is important that the wound should be kept freely open, and that great care should be exercised in the first dressing and syringing, that no injury be done to the walls of the abscess, that may be very thin and easily ruptured.

Reports of Hospitals.

BELLEVUE HOSPITAL.

NOTES OF PRACTICE AND PECULIARITIES OF TREATMENT.

ANEURISM OF THE TRANSVERSE AND DESCENDING PORTION OF THE ARCH OF THE AORTA—DIFFICULTY OF DEGLUTITION AS AN EARLY SYMPTOM—NO HISTORY OF EITHER RHEUMATISM OR SYPHILIS.

A MALE patient, æt. 38 years, gave the following rather indefinite history: He was well up to two months ago, when he began to have trouble about his heart, consisting of "soreness" in that region, a moderate amount of palpitation, and shortness of breath upon going upstairs. He also had slight cough, yet little or no expectoration. He restrained the cough as much as possible, because the act gave him pain. He had also noticed considerable difficulty in swallowing solid food, and placed his hand over the upper part of the sternum, thus indicating the seat of the obstruction to its passage. There had been no change in the voice. The only other symptom of which he complained was a "sense of weight about the heart," which prevented him from lying upon either side; if he turned upon the side there was a sensation as if the heart was sliding down upon that side, whichever it might be. He gave no history of articular rheumatism, and denied having had syphilis.

Physical examination.—On inspection, the veins upon the anterior and left side of the chest and neck

were found more prominent than upon the right, and there was a slight bulging in the left infraclavicular region; the bulging also somewhat involved the upper sternal region. He said he received a blow at that place about two years ago. On palpation, a distinct heaving impulse was given to the hand when placed over the region occupied by the bulging. The apex-beat was felt a little below and to the left of the normal position. A distinct impulse was felt to the left as the finger was crowded down behind the top of the sternum.

On percussion, there was dulness over the region where the bulging existed, being five and one-quarter inches in extent. On a level with the second rib, it commenced just at the right border of the sternum, and extended to the left five and one-quarter inches. There was no dulness upon percussion behind.

On auscultation, there was entire absence of respiratory murmur over the region occupied by the bulging. There was exaggerated respiration in the infraclavicular region upon the right side. There was less vesicular respiration upon the left side of the chest than upon the right. Over the left scapula there was heard more definite bronchial breathing than in the normal chest.

There was no cardiac murmur either at the base or at the apex. Over the region occupied by the bulging a double murmur was heard, synchronous with the first sound of the heart, and heard with greatest intensity at the junction of the *second* rib with the sternum upon the right side, but heard with distinctness over the second rib upon the left side. Upon both sides it was conveyed upward.

There was a marked difference in the radial pulses, the right being much less forcible than the left. When the patient was placed in the horizontal position his face became very turgid.

Diagnosis.—Aneurism occupying the transverse and descending portion of the arch of the aorta.

The Visiting Physician remarked there was one quite significant symptom in this case, and that was the difficulty of deglutition. Difficulty of deglutition might be present in connection with any form of thoracic aneurism, but when the aneurism involved the descending portion of the arch, it did not usually make its appearance except as a late symptom. In some cases the obstruction was so great that patients would not attempt to swallow solid food for a long time prior to death. This patient said he was obliged to "wash his food down if it was solid."

There was evidently some obstruction to the current of the circulation upon the right side; there was marked feebleness of the right radial pulse, but there was not such marked obstruction to the general return circulation as was sometimes noticed. It was not an uncommon symptom with aneurism of the transverse portion of the arch of the aorta for the patient to feel as though something was falling from the left to the right side. In this case such a sensation was felt whenever he attempted to lie upon either side.

Aneurisms occurring in persons who were the age of this patient were due either to rheumatism or to syphilis. He always expected to find syphilis as a cause of aneurism occurring in patients under *forty* years of age, and rarely found cases in which rheumatism had caused sufficient degeneration of the arteries to give rise to aneurism.

The fact that this man has not given any evidence of constitutional syphilis was not sufficient to exclude it as a cause of his aneurism.

There might have been some slight manifestation of the disease which the patient did not recognize. It was not infrequently the case that patients passed through the entire history of syphilis and had arterial degeneration, without once being conscious that they were victims of the disease. In fact, syphilitic degeneration of the coats of the arteries occurred most frequently in those cases in which a syphilitic history was not particularly well marked. Aneurism occurred much less frequently among those who gave a well-marked history of chronic syphilis than in those who had only a very few manifestations of the disease.

HYDROCELE.

The case had been treated by making multiple punctures (fifty or sixty) with an exploring needle. It was doing very well, and the inflammation which had followed the operation, it was thought, would accomplish the thing desired in this class of cases.

SPERMATOCELE—HYDROCELE.

The patient had a spermatocele upon the left, and a hydrocele upon the right side. The spermatocele had been aspirated three times, and each time the milky fluid withdrawn had been found to contain spermatozoa.

The hydrocele was treated by the multiple-puncture method, *fifty* punctures being made.

ENLARGED SPLEEN, PRODUCED BY MALARIAL POISONING, AND OCCURRING IN A CHILD ONE YEAR AND NINE MONTHS OLD—ABSENCE OF CACHEXIA.

The case was interesting because the disease occurred in so young a child. The child was perfectly healthy up to six months of age, when the family moved into a new locality. In that locality all the family, consisting of father and mother, and two children, had been sick with some kind of fever, accompanied by pains in the limbs, vomiting, and purging. The father was said to have had "brain fever" (probably a malarial manifestation). He was sick six weeks, and was unconscious considerable of the time. All the members of the family except the patient had suffered from at least two attacks. The child recovered after a sickness lasting seven or eight weeks, and it was then noticed that the abdomen began to enlarge, and from that time it had gradually but continuously increased in size. The countenance was bright and intelligent; he was quite well nourished; the skin was somewhat pale and slightly tinged with yellow, but there was no cachectic appearance. The abdomen was irregularly enlarged; the enlargement being more prominent upon the left than upon the right side. In the left side of the abdominal cavity there was a solid mass that could be readily grasped with the hand. The tumor extended from the left of the median line, downward to the crest of the ilium, and upward to the eighth rib. The skin over the abdomen was considerably discolored, but there was no marked emaciation. The conclusion was that the abdominal tumor was an enlarged spleen.

Hepatic dulness extended to about two inches below the free border of the ribs, but it was not regarded as abnormal. It was thought that the size of the spleen would rapidly diminish if the child could be removed from the city; at least he must be removed from the locality in which he was living. In addition to change of locality, quinine was recommended, but the change must first be made.

The existence of such an enlargement of the spleen without cachexia was quite remarkable. In such chronic cases, it was stated as a matter of individual experience that arsenic was a more efficient remedy than quinine.

RUPTURE OF THE LIGAMENTUM PATELLÆ—SUPPOSED FORMER FRACTURE OF THE PATELLA.

A male patient, æt. 47 years, was admitted into the hospital on account of an injury in the vicinity of the patella. Six years previously, while carrying a heavy trunk, he was upset by another porter, and upon attempting to raise himself he found that it was impossible. A surgeon was called, who said that he had received a fracture of the right patella. For that he was treated and in due time recovered. When admitted to the hospital the parts about the knee-joint were very much swollen, the patient was able to flex the limb slightly, but was incapable of making the slightest extension. The surgeon could make flexion and extension without giving the patient very much pain, and upon manipulation it was thought that the ligamentum patellæ was wanting—the finger passing immediately from the head of the tibia into the knee-joint. The patella was about three-fourths of an inch higher than upon the opposite side. The swelling was reduced by the application of ice about the joint for three days. When it had subsided, the diagnosis of rupture of the ligamentum patellæ was verified. An interesting point in the examination was the fact that, by the most careful manipulation, the surgeon was not able to find any separation of the fragments, hence he was led to doubt the truth of the statement that the man had formerly suffered from fracture of that bone. It was found, however, that the tubercle of the tibia was somewhat displaced, and it was thought that the injury formerly sustained was the same as that from which the man was then suffering.

The indications for treatment were the same as for fracture of the patella.

EXOPHTHALMIC GOITRE—PERSISTENT AND PROLONGED INCREASED FREQUENCY OF THE PULSE AND CARDIAC PALPITATION—ABSENCE OF ENLARGEMENT OF THE THYROID BODY.

A male patient, æt. 22 years, was seen who had been under observation since January, 1876. He was a German, a grocer by occupation, and there were several points of interest in his case.

In January, 1876, he was examined with the greatest care with reference to his heart. There was nothing important in his family history. In 1874 he had an attack of articular rheumatism, which was not very acute. He was a temperate man, had never indulged in self-abuse, and had had gonorrhœa only once. In 1872, having never had any previous sickness, he first began to suffer more or less from palpitation of the heart, which had continued to disturb him up to the date of the first examination in 1876. At that time his pulse, was 200 to the minute. There was no distinct cardiac murmur; merely a suspicion that there was a mitral direct murmur. There was *no enlargement* of the heart. There was no enlargement of the thyroid gland. The eyes seemed to be a trifle prominent, but it was not regarded as abnormal. Such were the important points in the case in January, 1876. In November, 1877, the condition of the patient was as follows: He had continued to suffer from palpitation since January, 1876. He had had irregular attacks of palpitation, but during the last two weeks it had been constant, and he felt "great want of breath" upon slight exertion. The palpitation occurred independent of exercise, and was developed while the patient was sitting or standing, and making no exertion whatever. The increased frequency of the heart's action had continued, and the average had been 126 to the minute. There was no doubt that the prominence of the eyes was abnormal; the projection was marked, but moderate. The apex-beat of the heart was in the usual intercostal space, but was carried about one inch to the left; the impulse was strong. From the strength of the impulse it was regarded as safe to say that the moderate enlargement of the heart was due to hypertrophy.

When the stethoscope was placed over the apex there was heard a rough murmur, preceding and ceasing abruptly with the commencement of the first sound (mitral direct): with the first sound there was heard a rather feeble blowing murmur (suspected mitral regurgitant).

There was no enlargement of the thyroid body.

The moderate hypertrophy of the heart had been acquired since January, 1876, and also the cardiac murmurs. It was regarded as a rational supposition that, with the attack of rheumatism from which he suffered in 1874, he had endocarditis, and the case was therefore interesting as illustrating the fact that several years were sometimes required for an endocarditis to develop lesions represented by physical signs.

The case was also interesting as illustrating how increased frequency of the heart's action might be prolonged, and yet not be attended by serious results.

There were present, then, prominence of the eyes, a persistent increased frequency of the pulse (having existed since January, 1876), persistent palpitation of the heart (having been present about eight years) and a certain amount of cardiac hypertrophy. The case was therefore diagnosticated as one of *exophthalmic goitre*, or Graves' disease, notwithstanding the absence of enlargement of the thyroid body. It was regarded as a rare form of the disease.

The treatment was directed to the functional disease of the heart. The object was to slow the frequency of the heart's action. For that purpose aconite or digitalis was recommended in such doses as were necessary to maintain the "continuous effect" of the drugs. Reference was made to one case in which tr. of aconite, administered in single-drop doses three times a day, produced a most satisfactory effect. The aconite had been tried in the present case, but it did not affect the patient so favorably as did digitalis. In this patient there was no evidence of anæmia, which usually accompanies Graves' disease. Chalybeate tonics were advised for the anæmia when present, and attention directed to the importance of proper hygiene.

It was remarked by the Visiting Physician that recovery was not impossible, that marked improvement was not of infrequent occurrence, and that the disease did not exhibit much tendency to destroy life.

INTRODUCTORY LECTURES.—The opening exercises of the seventy-second regular winter session of the College of Physicians and Surgeons took place in the college building, on Tuesday evening, Oct. 1, 1878, at 8 o'clock. The introductory address was delivered by Prof. Fessenden N. Otis, M.D. The exercises at the opening of the regular course of lectures at the Bellevue Hospital Medical College took place on Wednesday evening, October 2d, at 8 o'clock. The introductory address was delivered by Prof. Joseph D. Bryant. The introductory lecture to the course of the Medical Department of the University of the City of New York was delivered by Prof. J. Williston Wright, M.D., on Tuesday, Oct. 1st, 1878, at 8 o'clock P.M. All of the schools are well patronized, and the different classes bid fair to exceed in size those of last year.

Progress of Medical Science.

ON THE CHANGES IN THE MEDULLA OF THE LONG BONES, WHEN INFLAMMATION IS EXCITED EXPERIMENTALLY IN ONE OF THEM.—In the course of his investigations on the experimentally excited inflammation of the bones, Prof. Busch, of Berlin, was struck with the fact, that the changes, in some cases, were not confined to the bone operated on, but that, on the contrary, the medulla of all the long bones was more or less affected. The changes presented all degrees of variation, from simple hyperæmia of the fatty marrow to complete transformation of the same into red (lymphoid) marrow. They were most marked when the inflammatory irritant employed was sufficiently intense in its action to cause mortification and to prove fatal inside of a week. When the inflammatory reaction was not so intense, and the dogs were not killed until the end of six or eight weeks, the bones not operated on usually presented no change.

The changes were not equally intense in all the uninjured long bones. They were invariably most marked in the humerus, and next in the femur; the tibia, radius, and ulna presented much more resistance to the morbid process. In the highest grades of the change, the marrow was fluid, and all trace of fat had disappeared. No blood-vessels even could be found in the portions removed for examination; it seemed as if the blood had circulated not in closed canals, but in cavernous spaces. The field of the microscope was filled in about equal proportions with red blood-corpuscles, and with round or jagged colorless cells, each of which possessed a large, round nucleus. Nucleated red blood-corpuscles were absent, or present only in very small numbers. In one case some of the nuclei of white cells were distinctly colored by hæmatine. Between these advanced changes and pure fatty marrow, all possible intermediate stages were found. In none of the cases was the spleen enlarged, but the lymphatic glands situated near the focus of inflammation were invariably much swollen.

The microscopical appearances in these cases were very similar to those met with in some cases of leucæmia. Macroscopically the changes resembled perfectly those of acute anæmia, which have been studied experimentally by Neumann and Litten and Orth, but microscopically they differed in the proportions of nucleated red blood-corpuscles. Prof. Busch believes that the septicæmic character of all the cases that proved fatal during the first week, had an essential influence in the production of the changes in the marrow.—*Berliner klin. Wochenschrift*, April 1, 1878.

MANTEGAZZA'S GLOBULIMETER.—This simple and ingenious apparatus consists of a cylinder for the reception of the blood, a turning disk, and a stearine taper. The cylinder is supplied with glass windows. The disk has five round openings at its periphery, which are numbered in order: No. 1 is blank, and is marked plethora; No. 2 has four blue glasses, and is marked average in man; No. 3, nine glasses, marked average in woman; No. 4, fourteen glasses, marked slight anæmia; No. 5, twenty glasses, marked anæmia. The observer looks at the flame of the taper through the openings in the disk and the blood in the cylinder, and the condition of the blood is determined from the number of blue glasses that must be used before the flame becomes invisible.

The following is the method of investigation: A small vein in the hand is opened, and one cubic centimetre of blood is drawn by aspiration into a graduated pipette and emptied into a glass containing exactly 96 grammes of a solution of carbonate of soda (one part soda to two parts water). This is stirred briskly for a few moments and then poured into the cylinder. The disk is then attached to the cylinder, and the observer looks through opening No. 1 and the diluted blood at the flame of the candle, which is placed at a distance of one metre. The investigation must of course take place in a dark room. If the flame be invisible, the blood is plethoric; if visible, the observer turns the disk until opening No. 2 is before his eye, and so on until he can no longer see the flame. The inscription over the opening at which the flame becomes invisible gives the condition of the blood. For more exact investigation a second disk or cylinder is supplied, on which any number of glasses, from one to forty, can be placed. As Prof. Mantegazza has determined, after careful and repeated experiments, that each blue glass corresponds to 125,000 red blood-corpuscles, it follows that the number of red corpuscles contained in a cubic millimetre of the given blood can be reckoned with great accuracy from the number of glasses required to hide the candle flame. The very slightest differences or changes in the blood of a patient can in this way be determined with but little expenditure of time and patience. For ready reference Prof. Mantegazza has prepared a table giving the number of blood-corpuscles corresponding to each combination of glasses from one to thirty. The following will serve as an example of the table:

0 glasses	5,625,000 red corpuscles		Plethora
4 "	5,125,000 "		Aver. in man.
9 "	4,500,000 "		" " woman.
14 "	3,875,000 "		Slight anæmia.
20 "	3,125,000 "		Anæmia.
26 "	2,375,000 "		Intense anæmia.

—*Berliner klin. Wochenschrift*, April 8th.

FIFTY-TWO SUCCESSFUL CASES OF LITHOTOMY.—Dr. Alan P. Smith, of Maryland, reports that he has performed lithotomy fifty-two times, and in each instance without a fatal issue. Of these, sixteen were below five years of age, thirteen between five and ten years, eleven between ten and twenty years, five between twenty and forty, and seven between forty and seventy-five; four were below two years, and one was only twenty-one months old. Of the whole number, there were only two negroes—the youngest and the oldest. In every case but six the operation was performed with the lithotome of his father, the late Nathan R. Smith. The cases were not selected; in fact, Dr. S. operated whenever the opportunity offered, with one exception, when the patient was brought moribund into the hospital. Certain rules have always been observed, which he thinks may have had some influence in determining the result. He never operates when the barometer is low, but waits until the weather is bright and clear. During the first twenty-four hours he sees the patient at suitable intervals, and introduces the gum catheter if the urine does not pass off freely through the cut. This he finds rarely necessary in young subjects, while adults usually have retention for that period of time. He makes a very free incision through the skin and subcutaneous connective tissue, so that there shall be no pocket in which blood, pus, or urine may collect. After the operation he applies carbolized oil to the wound freely. Most of his success he attributes, however, to the use of the instrument conceived by his father.—*Trans. of the Med. and Chir. Faculty of the State of Maryland*, 1878.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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A NATIONAL HEALTH BUREAU NEEDED.

THE practicability of creating a National Health Bureau, with full power and corresponding means, is becoming more and more demonstrable as the necessities of the hour present themselves.

If no other argument could be offered in its favor, the experiences during the present epidemic of yellow fever should be sufficient to secure the passage of any law having this end in view. Never before was the want of some systemized supervision of a wide district of country more clearly shown than in the spread of the fever to various cities and townships in the immediate vicinity of its starting-point, and along the routes of direct communication by rail and boat. Of course there is yet considerable room for conjecture as to how the disease may be propagated, but the constantly increasing testimony in favor of the transportation of the poison by things rather than persons, greatly simplifies the question of quarantine, and promises good results to any simple rules which may have a wide application and a systematic enforcement.

As we have before remarked on frequent occasions, the groundwork for a national bureau is already laid in the Marine Hospital Service, the good offices of which have been specially apparent in disseminating information concerning the progress of the epidemic and other matters connected therewith, which have been of the greatest benefit to the public. While such results demonstrate what may be done with limited powers and stinted means, there can be no calculation as to the benefits which may grow out of a really comprehensive law which may create a bureau for the nation, with proportionate scope, jurisdiction, and power to that of a health board of a town. In other words, to do for whole districts of country, river valleys, mountain slopes, railway and steamboat routes, what is done by local boards for streets and alleys, or for houses and apartments.

Dr. Woodworth, in his recent communication to the RECORD, concerning the availability of internal quarantine in preventing the spread of an epidemic, referred among other things to the inconsistency of shutting off communication with any particular town on the Mississippi, when the steamer Porter was allowed to carry her pestiferous cargo for miles up the river without hindrance, and almost without protest.

It is circumstances like these which serve as the strongest possible appeals for such alterations in the laws, for such creation of new powers as shall be competent to arrest travel along any of the great highways of the country when the public safety demands it. Our seaports are quarantined in such a manner as to demonstrate beyond the possibility of doubt the utility of the measure, and yet hundreds of miles of river are opened to the undisputed dissemination through the very heart of the country of the most dreadful of all plagues. The same may be said in regard to our railroads, single lines of which own routes through several States, and stretch over an area of thousands of miles.

It is quite evident that no State board of health, or any collection of them, can or will so concert their actions upon a sanitary question as to establish any necessary quarantine along these routes. The general government, however, through a properly constituted bureau. could accomplish this with certainty, could properly harmonize State interests, and would, besides, command respect for its orders, which would be proportionate with the power to execute them. Had such a board existed at the outbreak of the epidemic in New Orleans, it is impossible to calculate how much money would have been saved, and how many precious lives would have escaped the sacrifice.

Whatever may be said against the impracticability of internal quarantine, there is no argument against systematizing such general means of protection for towns along the great arteries of travel, and in different States, as shall express the advanced views held by leading sanitary authorities. The experiences at this port demonstrate how this can be done consistently; how the interests of all can be recognized, and still all be benefited; how disease can be effectually quarantined and yet business go on as usual; how by a proper and intelligent conservatism the people are educated to endorse sanitary regulations and jealously to guard against any infringement of the necessary authority of the health officials. From this point of view, and under proper centralizing influences, it can easily be proven that all the internal quarantine that is necessary in times of great peril can be made effective and that the people themselves may offer, in their own interests, the requisite assistance.

But not only during pestilence, but at other times, will there be the greatest use for such a bureau. Our great rivers are becoming polluted, our great railroads are interfering with the drainage of the towns

through which they pass, are altering the natural watercourses of different sections of country, are shutting off the drainage of swamp-lands and the like, and there is at present no power to arrest the spread of the evils or mitigate their results.

On general principles, then, there can be no possible argument against the formation of a bureau such as has been suggested, except, perhaps, that it may be used as a mere political machine and managed by incompetent and irresponsible individuals. But of the possible dangers in this connection we shall have something to say at a future time.

THE YELLOW-FEVER COMMISSION.

THE vote of the Medical Society of the County of New York, approving a resolution for the appointment of a national commission of medical men to report upon the causes and prevention of yellow fever, was eminently proper, and what was very naturally anticipated. The necessity of the appointment of such a committee need not be urged upon the profession, and the community at large do not need any arguments in favor of the great good which will thereby be accomplished. The only thing necessary to bring about the desired result is the proper presentation of the subject before the people. It is quite obvious that the medical profession has no small share in this work; in fact, upon its individual and collective exertions the main issues must depend. The medical societies over the country should rise to the dignity of the occasion—should throw their influences in the right direction, and, following the example of the Society of this county, deliberately vote in favor of the scheme.

The necessity of making the commission a national one, and, of course, under the direct patronage of the government, will be apparent to all who consider the necessity of ample power and ample means as primary factors in the investigation. The government owes such a service to the people, not only from a sanitary, but a commercial point of view; and when the matter is fairly presented to Congress, as it will be, the appropriation should be liberal, and should be made without question.

As a move in the right direction, but as purely preliminary to the one under contemplation, we may refer to the creation of a commission by the Supervising Surgeon-General of the Marine Hospital Service. Although under private auspices, the committee has enough of official character to guarantee good and faithful work during the progress of the epidemic. The members are to begin their labors at once, visit the different infected localities, and "glean all important facts possible to be obtained which have reference to measures of prevention of future epidemics." For the present, this is the best that can be done before Congress meets, but it cannot possibly accomplish what we must expect from a Commission clothed with necessary power by the government, and carrying on investigations directly under its orders. While, however, we wish success to these preliminary labors, we must keep constantly in mind the end at which we must aim, in order that Congress, at its coming session, may be prepared to vote intelligently upon this vital question.

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

THIRD ANNUAL MEETING.

Held in Philadelphia, September 25, 26, *and* 27, 1878.

WEDNESDAY, SEPTEMBER 25—FIRST DAY—MORNING SESSION.

THE Society met at the hall of the College of Physicians, and was called to order at 10 A.M. by the First Vice-President, Dr. Wm. Goodell, of Philadelphia.

DR. ALBERT H. SMITH, of Philadelphia, in behalf of the medical profession of that city, welcomed the guests and the Fellows of the Society.

The following gentlemen were received as members by invitation: Drs. Griffith, A. F. Erich, and Benj. Whiteley, of Baltimore; Bartlett, of Milwaukee; A. Brandis, of New York; Wm. Corson and H. Corson, of Norristown; W. C. B. Fifield, of Boston; S. D. Gross, D. Hayes Agnew, S. Weir Mitchell, Alfred Stille, Alfred Fricke, Nathan Hatfield, Sr., John Packard, J. Forsyth Meigs, R. A. Cleeman, —— Harlow, W. H. H. Githens, W. F. Jenks, G. B. Wood, W. S. W. Ruschenberger, T. S. Kirkbride, and H. H. Smith, of Philadelphia.

The first paper was read by DR. J. C. REEVE, of Dayton, O., and entitled

A CASE OF RUPTURE OF THE PERINEUM WITHOUT IMPLICATION OF THE VULVA.

The case was one in which the child had been delivered by the rectum, and the vulva was left intact.

DR. REEVE reported it, 1st, on account of its rarity, he having found only two such cases upon record; and 2d, the great rarity of this common variety of central rupture of the perineum in multiparæ. He had not been able to find a single fair case of the accident occurring in the multiparous woman. The case was also interesting in a medico-legal point of view.

The paper gave rise to discussion concerning the proper treatment of lacerated perineum, both prophylactic and after it had occurred.

DR. H. F. CAMPBELL, of Augusta, Ga., believed the proper method of treating laceration of the perineum was to close it by an operation as soon as possible after the occurrence of the accident.

DR. JAS. P. WHITE, of Buffalo, resorted to triangular incisions in cases of threatened laceration, and believed that the knife should be resorted to in such cases much more frequently than it was.

ON THE SURGICAL TREATMENT OF DYSMENORRHŒA.

DR. J. MARION SIMS sent a paper upon the above subject, which was read in abstract by the Secretary. It consisted essentially in a minute description of the two surgical operations, known as Simpson's and Sims'. These operations, it was claimed, were entirely different from each other; Simpson's was a *bilateral*

incision made for the cure of stenosis of the cervix uteri, while Sims' operation was the *antero-posterior* incision. Dr. Sims regarded the two operations as entirely different from each other, and such as were applicable to entirely different classes of cases. *Simpson's* was the operation suitable only for cases of stenosis of the intervaginal portion of a symmetrically developed cervix, while *Sims'* operation was suitable for cases of unequally developed intervaginal portion of the cervix, where the posterior segment was considerably longer than the anterior, and associated with anteflexion. The paper was profusely illustrated, and contained an extended description of instruments and the history of the two operations.

The object of the paper seemed to be to establish the priority of Simpson in suggesting and performing one operation for the cure of dysmenorrhœa and sterility; to establish the priority of Sims in performing another and different operation for the cure of stenosis and sterility; to discriminate and point out the exact conditions under which one or other operation should be selected, and to give a minute description of the exact steps necessary in performing the operation, and the subsequent care necessary to secure its success.

The paper being before the Society for discussion,

Dr. Fordyce Barker remarked that, although thirty-three years had passed since Sir James Y. Simpson suggested the bilateral incision of the cervix uteri for the cure of dysmenorrhœa and sterility, and twenty had passed since Dr. Sims suggested and performed the antero-posterior incision of the cervix uteri for the cure of certain forms of stenosis, yet it must be confessed that even at this day we had not arrived at those settled relations of practice which had been obtained in other departments of surgery. There was yet a great divergence of opinion among eminent gynecologists with reference to the utility of the operation, as to whether any surgical operation was necessary, and as to what surgical procedure was best adapted to safely remove the different conditions found in the cervix uteri and their attendant consequences. In discussing the question, Dr. Barker believed it was pertinent to inquire, how did it happen that one man found it necessary within twenty years to incise the cervix uteri in nearly 1,000 cases, another in 380 cases, and another had performed the operation nearly 377 times within a very few years; while others, who fully believed in the necessity of the operation in cases of stenosis, and who had had equally as large a sphere for gynecological observation in both hospital and private practice, had never found it necessary to perform the operation oftener than in one-fifth of the smallest number which had been given? Was it possible that a large class of practitioners had overlooked a great number of cases in which indications for the operation were present? Was the diagnosis of stenosis of the cervix uteri so obscure and difficult? To accept such an explanation was to impute ignorance and incompetency to a large number of eminent gynecologists, both in this country and in Europe.

The answer to these questions was to be found in the differences of opinion with reference to the necessity and the utility of the operation. There were many who formerly had resorted to the operation, but had gradually reached the conclusion that it was required much more rarely than formerly they had supposed it to be necessary. Indeed, the practical question was easily reached, was stenosis of the cervix, whether congenital or acquired—was the physical configuration of the cervix, as described by the author of the paper, necessarily and always the cause of those symptoms—such as dysmenorrhœa and sterility, or any other symptom—which justified an operation of some severity, and one which was always attended with some dangers? It was but justice to say, however, that, in all the cases of death reported, the cause had been ascribed to accidents or errors which greater care and a larger experience might possibly prevent. The object of the operation was to make the canal of the cervix uteri sufficiently large to allow menstrual fluid to pass freely, and also to prevent the free entrance of the fecundating element. Now the question arose, was it certain that any of the various conditions of the cervix uteri described in the paper justified and rendered necessary the performance of the operation, and secured results which exempted the operator from the condemnation of his own conscience in having performed an unnecessary operation? How was it to be explained that some were becoming enthusiastic advocates who had not performed the operation very frequently, while others, who had performed it frequently, and with equal capacity for honesty and for observation, were becoming convinced that it was less and less necessary? Could it be possible the explanation was to be found in the fact that those who had become eminent as brilliant operators had been placed in a false position, which did not allow them to judge clearly with reference to the operations which they had been performing?

Dr. Barker continued his remarks at some length.

Dr. Elwood Wilson, of Philadelphia, remarked that he was not an advocate of either Simpson's or Sims' operation, and yet he did not deny the possibility of the existence of cases in which it might be necessary to perform them. He was inclined to believe, however, that they had been performed much more frequently than was justifiable. Treatment by forcible dilatation was what he favored, and was a method which, in his experience, had not been followed by unfavorable results, and at the same time he had not been obliged to confine his patients to the bed for more than twenty-four hours after the performance of the dilatation. So far as he had been able to trace his cases, permanent benefit had followed this plan of treatment.

Dr. Noeggerath, of New York, presented in brief the views held by the late Dr. Peaslee with reference to the two operations which had been described in the paper. He believed that all could be accomplished by Dr. Peaslee's operation that had been claimed for Dr. Sims' operation. One thing, however, was to be taken into consideration, and that was, unless full and true reports could be obtained of the condition of the patients at the end of one or two years, the discussion of the subject might be continued indefinitely without arriving at reliable conclusions regarding the actual or the relative merits of either incision or dilatation. For, although cases were effectually cured for two or three months, they were, at the end of eight or ten months, in most instances, in the same condition as before the operation was performed, whether it was incision or dilatation. Dr. Noeggerath thought the tendency was to supplant the surgical operation by other methods of treatment which were less dangerous and equally successful.

Dr. Wilson, of Philadelphia, said that many of his patients had remained cured up to twelve and fifteen months, and in one instance he had seen the patient pass through the process of parturition subsequent to the forcible dilatation.

Dr. H. P. C. Wilson, of Baltimore, thought there were many cases of stenosis of the internal os asso-

ciated with anteflexion in which no other measure was adequate to rectify the condition except division of the cervix. He favored the cutting operation, and thought it should not receive the condemnation which by inference had been given it by all the speakers who had preceded him. Although he himself had operated upon many patients upon whom, in the light of his experience, he would at the present time refuse to operate, nevertheless he favored the cutting operation, and thought it should not be entirely discarded. He believed there were certain cases—for example, those in which the uterus was bent upon itself in a marked degree—in which nothing short of the cutting operation could give permanent relief. The class of cases to be especially excluded from the operation was those in which there were evident remains of cellulitis and peritonitis, for in those there was always danger in resorting to the surgical operation.

Dr. Lyman, of Boston, remarked that he had not had any fatal results follow the cutting operation, and yet he had not had any great success in curing his patients. Ordinarily he had found his patients in the same condition six months after as before the operation, and besides, he had not had as good results as from forcible dilatation.

Dr. Emmet, of New York, directed the attention of the Society to one point, namely, that when the flexure was above the vaginal junction it indicated the existence of trouble elsewhere, as, for example, thickening of the broad ligaments in consequence of former attacks of cellulitis or peritonitis. When the operation had been performed in such cases he had never known the woman to be permanently relieved. Such thickening gave rise to obstruction of the circulation, and was the cause of a chordee of the uterus, which after a time became permanent. In the beginning the fault did not rest in the uterus, nor did the operation relieve the condition of the uterus in such cases.

A CASE OF EXTRA-UTERINE PREGNANCY WITH DISCHARGE OF THE FŒTAL BONES THROUGH THE BLADDER.

Dr. James P. White reported a case, and accompanied the report with some remarks. It was regarded as interesting with reference to the following points:

1. The location of the fœtal tumor was one rarely assumed in cases of extra-uterine pregnancy, namely, in front of the uterus and top of the bladder.

2. The discharge of the fœtal remains through the bladder was one of the most infrequent of the various methods by which they might be disposed of by spontaneous elimination.

Discussing the propriety of an operation, Dr. White believed it to be better, unless there were special indications, to leave this class of cases to nature rather than to resort to abdominal incision for the removal of the fœtus.

Dr. John T. Atlee, of Lancaster, gave the history of a case of extra-uterine pregnancy, in which the abdominal operation had been performed successfully by his son, Dr. Walter F. Atlee. The management of the placenta was, by Dr. Atlee, regarded as an important point in these cases. He believed that if it was allowed to remain undisturbed the operation might become as popular as was that of ovariotomy at the present time.

Dr. Storer, of Boston, referred to a case of extra-uterine pregnancy which was left to nature, and in which the bones of the fœtus passed away through the rectum of the mother. The case was reported as one illustrating the non-necessity of surgical interference.

Dr. White said that he did not wish to be understood as saying that no operative interference should be instituted, but that operative interference should be instituted only when there were some special indications. With reference to leaving the placenta undisturbed, he thought that point had been settled in favor of non-interference.

Dr. Campbell, of Georgia, alluded to a case which in his opinion favored leaving this class of cases to nature's care.

The Nominating and Auditing Committees were announced, and the Society adjourned to meet at 3 P.M.

First Day—Afternoon Session.

The Society was called to order at 3 P.M. by Dr. Goodell.

The following gentlemen were elected members by invitation:

Drs. A. T. P. Garnet, of Washington; Isaac Price, of Westchester, Pa.; W. H. Baker, of Boston; Isaac Ray, of Philadelphia, and —— Sutton, of Pittsfield, Mass.

The first paper was read by

Dr. J. F. Johnson, of Washington, and entitled:

A CASE OF FOOT-AND-HEAD PRESENTATION—FRACTURE OF THE SPINE IN UTERO.

The case was one in which a foot presented in advance and with the vertex, but on account of the delay, the severity of the labor-pains, and the restlessness of the mother, the doctor found it impossible to push the head up and produce a footling presentation. There was evident danger of rupture of the uterus, and delivery was effected by the forceps. The father objected to craniotomy. The child was literally squeezed to death by the uterine forces, and after delivery was completed, it was discovered that there was fracture of the spine at the lower third of the dorsal region. The case was reported with special reference to treatment, and Dr. Johnson thought the Society could do great good by giving authority to the statement that the forceps operation should be regarded as a means of preventing danger to the mother from puerperal diseases, as well as a means of rescuing her when in danger in childbirth.

The paper was discussed by Drs. Engelman, of St. Louis; Noeggerath, of New York; Penrose, of Philadelphia, and Campbell, of Georgia.

Dr. Emmet, of New York, read a paper on

THE NECESSITY FOR EARLY DELIVERY, AS DEMONSTRATED BY THE ANALYSIS OF ONE HUNDRED AND SIXTY-ONE CASES OF VESICO-VAGINAL FISTULA.

The object of Dr. Emmet's paper was to prove that instrumental delivery had rarely, if ever, any agency in the production of vesico-vaginal fistula. The direct cause was always in the delay in delivery after impaction of the fœtus had taken place, while the indirect one was, in a large proportion of cases, neglect to empty the bladder.

Dr. Emmet believed that the extent of the injury did not necessarily bear any relation to the length of the labor, but generally depended upon the mode of delivery. That assertion rested upon the supposition that we could determine the average amount of damage by the length of time necessary to repair it afterwards. To illustrate this position an analysis of one hundred

and sixty-one cases of vesico-vaginal fistula was made, and it was shown that the duration of treatment in those instances in which the accident had occurred in connection with natural delivery was considerably more than in connection with instrumental delivery.

Dr. Emmet did not hesitate to make the statement that he had never seen a case of vesico-vaginal fistula which could be shown to have been made by instrumental delivery. The paper, therefore, had an important medico-legal value. The practical point to which special reference was made was that the catheter should always be introduced prior to the forceps operation, regardless of the statements made by either nurse or patient with reference to the condition of the bladder.

The paper being open for discussion,

Dr. A. H. Smith, of Philadelphia, remarked that the report given by Dr. Emmet was very satisfactory to those who were in the habit of teaching that forceps should be used early in certain cases of labor. The old teaching that the woman should be allowed to remain in labor twenty-four hours before instruments were to be used had to a very great extent been supplanted, and he had no doubt the number of cases of vesico-vaginal fistula had been reduced in consequence. The danger to the soft parts of the mother was not when the head or any other portion of the child was driven intermittingly against the tissues, but when they became impacted in the pelvis and gave rise to continuous pressure.

With reference to the use of the catheter before introducing the forceps, he thought it better to apply the instrument and draw the head down a little rather than to resort to forcible introduction of the catheter before the forceps were applied.

Dr. Storer, of Boston, remarked that among the several thousand cases of midwifery which he had attended, there had occurred two cases of vesico-vaginal fistula. Doubtless the forceps was an instrument which possessed great value, but the idea that it was one that was to be constantly used should be carefully considered. While he coincided with Dr. Emmet in most to which he had directed attention, yet he believed we should be careful to point out the fact that injury was produced by making too free use of the obstetric forceps.

Dr. Fordyce Barker remarked, with reference to the influence of an over-distended bladder in retarding or protracting labor, that it was doubtless the observation of every experienced obstetrician that, by the introduction of the catheter, what had been regarded as a proper case for instrumental delivering had been converted into an active labor that terminated in a speedy delivery. Although obstetric writings taught the importance of watching the bladder during the process of parturition, yet there was nothing which was more commonly neglected.

With reference to the forcible introduction of the catheter alluded to by Dr. Smith, it had been his practice to introduce the forceps, bring the head down so as to relieve the urethra from pressure, and then use the catheter before completing the delivery.

Dr. Barker alluded to another cause of prolonged first stage of labor, and that was exhausted nerve-power. Under such circumstances he regarded it as necessary either to give the patient rest by the use of opium, or overcome uterine inertia by the use of full doses of quinine administered at short intervals.

He further believed that the dangers from the use of the obstetric forceps had been very much exaggerated. The older he grew and the larger his sphere of observation became, the more frequently he found it necessary to resort to instrumental delivery, and could see his error in not having used the forceps earlier and oftener than he had done in years past.

Dr. Penrose, of Philadelphia, thought one of the most important points in Dr. Emmet's paper was his statement with reference to the exact time when the forceps should be applied, namely, immediately when the head ceased to recede after the occurrence of a pain. Delay at that time was dangerous, and the woman was in great peril, unless speedy delivery was effected.

Dr. Wilson, of Baltimore, remarked, with reference to the use of the forceps, that he had never regretted using the instruments, but had very often regretted that he had not resorted to them earlier. He would go a little farther than had the gentleman who preceded him, and say that the forceps should be used as soon as the head ceased to advance.

He had frequently used the forceps when he felt absolutely certain that the woman would be safely delivered by nature. He also believed that when the woman was under the influence of an anæsthetic and the forceps were properly used, the instruments could prevent laceration of the perineum.

Dr. Barker thought that failure on the part of the head to recede in the interval of uterine pains was an uncertain rule to guide us in the use of the forceps; for there were many labors in which it was found that in the interval the head remained exactly as it was, and yet the labor went on normally. He should say that, as soon as it was evident that the head had ceased to advance, providing the uterine contractions were sufficiently powerful, the forceps should be resorted to.

Dr. Penrose thought that when the head ceased to recede it almost invariably ceased to advance, and therefore, practically, Dr. Barker and Dr. Emmet were of the same opinion.

Dr. John T. Atlee, of Lancaster, favored the frequent and early use of the forceps. He regarded the use of ergot in the first stage of labor as nearly as constant a cause of vesico-vaginal fistula as any which has been recognized. He preferred to use the forceps in cases of delayed labor.

Dr. Storer thought that the forceps oftentimes were applied under improper circumstances, and therefore the Society should be cautious in the expression of views which were especially to influence the younger members of the profession.

With reference to laceration of the perineum, Dr. Storer remarked that, in nearly every case which had fallen under his observation, the injury had been produced by the use of the forceps.

Dr. J. P. White, of Buffalo, regarded the tables presented by Dr. Emmet as a vindication of his own practice during the last thirty years. His rule had been that, when the head ceased to advance with each repeated pain, the forceps should be employed. By so doing, the danger to the perineum could be lessened, and also the danger to the woman from exhaustion.

Dr. A. H. Smith, to correct any misapprehension which might arise from his remarks, said that merely to hasten the first stage of labor should not be an indication for the use of the forceps. He regarded it as criminal to resort to the use of ergot in the first stage of labor.

The discussion was continued by Drs. Emmet, Barker, Reeve, and Goodell.

The Society then adjourned, to meet on Thursday, September 26th, at 10 A.M.

THURSDAY, SEPT. 26TH—SECOND DAY—MORNING SESSION.

The Society was called to order at 10 A.M. by Dr. Goodell.

The following gentlemen were elected members by invitation: Drs. E. L. Duer and W. B. Atkinson, of Philadelphia, and Nathan Bozeman, of New York.

THE HAND AS A CURETTE IN POST-PARTUM HEMORRHAGE.

DR. H. P. C. WILSON, of Baltimore, read a paper upon the above subject. It embraced a detailed description of a case of severe post-partum hemorrhage, in which, after all means at hand had failed, the bleeding was arrested by introducing the hand into the uterus and raking the placental surface with the finger-nails. The labor was uncomplicated. The hemorrhage came on without apparent cause. The hand was carried into the uterus, the clots turned out, and the organ excited to contraction until the hand was expelled. Ice was also carried into the uterus, and the operation of emptying the organ of clotted blood was repeated four times. Ergot was given by the mouth, by the rectum, and subcutaneously. Still the uterus relaxed, and the case became very alarming. The use of the hand as a curette suggested itself to Dr. Wilson in the emergency, and it was at once introduced and the placental surface raked with the finger-nails. There was no bleeding after the first raking, although the uterus relaxed and the hand was carried into the cavity, and the raking process was repeated. For about forty-five minutes the uterus remained enlarged and its mouth patulous after the second raking. Then severe after-pains set in, produced firm contraction, and there was no further trouble in the case. The patient made a good recovery. Dr. Wilson's experience in the case related was so satisfactory, that in the future treatment of post-partum hemorrhage, he should not hesitate to use the hand to the placental surface as a curette, provided prompt contraction of the uterus could not be produced by the ordinary means at hand.

THE TREATMENT OF POST-PARTUM HEMORRHAGE

was the title of a paper then read by DR. R. A. F. PENROSE, of Philadelphia.

After making some remarks regarding the appalling character of post-partum hemorrhage, the necessity for instant and efficient treatment, Dr. Penrose passed to the consideration of the causes of this most alarming complication. The great cause was set down as uterine inertia, yet there were many other causes, such as partial attachment of the placenta, diseases of the uterus, etc., which must be appreciated in order to apply proper remedies. The most painful predisposing cause was a peculiar idiosyncrasy of the woman, giving rise to a peculiar flaccidity of the uterus. The design of the paper was to study the relative value of certain remedies to be employed in the curative treatment of this form of hemorrhage.

The relative value of friction, application of cold and heat, electricity, exciting reflex contraction by acting upon distant organs, etc., etc., was duly appreciated by all, and they were passed without extended comment. With reference to treatment of this form of hemorrhage, when it depended upon uterine inertia, what was desirable was a remedy which could be easily obtained under all circumstances, one which admitted of application in the simplest manner, and at the same time a remedy, the use of which would not be followed by injurious consequences. The actual cautery was an effectual remedy, and so was the injection of persalts of iron into the cavity of the uterus, but unfortunately they were exceedingly liable to produce disastrous results, or they might not be at hand. The same was true of other remedies which had been employed. The remedy of which Dr. Penrose made special mention for the arrest of post-partum hemorrhage was *common vinegar*. Since 1854 he had used it with invariable success. The advantages claimed for it were:

1. That it could be readily obtained;
2. That it could be easily applied, and without special apparatus;
3. That it always cured the hemorrhage, or rather, it had not failed in his practice;
4. That it was sufficiently irritating to excite the most sluggish uterus to contraction, and yet not so irritating as to be subsequently injurious;
5. That it was an admirable antiseptic;
6. That it acted upon the lining membrane of the uterus as an astringent.

Dr. Penrose used this remedy in the following manner: saturate a rag with vinegar, carry it into the cavity of the uterus, and squeeze it. In the vast majority of cases the hemorrhage ceased as by magic when the vinegar passed over the surface of the uterus and the vagina. He believed that the salts of iron should seldom or never be used, but in a case, which was supposable, in which the vinegar failed he would resort to that remedy.

The above papers being before the Society for discussion,

DR. J. P. WHITE, of Buffalo, remarked doubtless all would agree with Dr. Penrose that uterine inertia was the most common cause of post-partum hemorrhage. The remedy which had been proposed by Dr. Wilson he regarded as valuable, but he was not able to understand the analogy between it and the action of the curette in the treatment of certain troubles affecting the internal surface of the uterus. Dr. Penrose had introduced a new remedy, but Dr. White was not prepared to accept it as one to be invariably successful.

DR. T. G. THOMAS, of New York, remarked that the question always arose whether the uterine inertia was primary or secondary. He believed that in a very large proportion of cases post-partum hemorrhage was due to mismanagement of the uterus during the time the child was being expelled and immediately afterwards. He regarded the third stage of labor as tonic contraction of the uterus after the expulsion of the placenta, and to secure such contraction was the first duty of the obstetrician. With reference to the remedy introduced by Dr. Penrose, doubtless it was a valuable one, yet the idea that it possessed any specific action, or any remedy employed for that purpose, should be set aside, for it was altogether probable that they acted simply as local irritants to excite uterine contraction.

DR. JOHN T. ATLEE, of Lancaster, commended the treatment spoken of by Dr. Wilson, and believed the hand and arm were the most ready and efficient remedy at our command for the arrest of post-partum hemorrhage.

DR. A. H. SMITH thought that post-partum hemorrhage was due to one of two causes, either distention or laceration. If the uterus was emptied it would contract, and the hemorrhage would cease. The main point in the treatment, therefore, was not to introduce anything into the cavity of the uterus which would prevent complete contraction. The means which he had employed with greatest success had been in-

jection of hot water; the water should be injected at the same time the clots were turned out, and at a temperature of 110° F.

Dr. Campbell, of Augusta, Ga., thought the idea of irritating the placental surface was valuable and worthy of consideration. He spoke highly of the use of injections of tr. of iodine. He disapproved of the use of the persalts of iron.

Dr. Engelmann, of St. Louis, approved of the use of the iron-salts, and had come to rely upon them in extreme cases.

Dr. Trask, of Astoria, L. I., stated that an analysis of the cases in which iron had been used showed that the benefit which followed was due, not to its styptic, but to its irritant action.

Injections of the tr. of iodine had been his favorite method of treatment.

Dr. Bozeman, of New York, believed that if compression was made over the fundus of the uterus at the same time the hand passed into its cavity to remove the clots, the hemorrhage would almost invariably be arrested.

Dr. J. R. Chadwick, of Boston, thought that a very good remedy in these cases was ether used hypodermically. He had employed it in three cases with the effect of producing prompt tonic contraction.

Dr. Barker, of New York, mentioned the hemorrhagic diathesis as one of the predisposing causes, and related a case in illustration. Because of the existence of this diathesis the woman nearly lost her life, notwithstanding the most vigorous prophylactic treatment. With reference to treatment of this form of hemorrhage he would, if possible, avoid introducing the hand into the cavity of the uterus, because of the liability to do injury by such procedure.

Dr. Wilson thought injury to the uterus was not likely to follow introduction of the hand when all the parts were relaxed. He had never used the persalts of iron and did not approve of their use. His hand was the therapeutical agent upon which he relied most, and he had never met with any injuries from its use that confirmed Dr. Barker's fears.

Dr. Penrose agreed with Dr. Barker that the hand should not be needlessly introduced into the uterus. He still regarded the remedy which he had proposed as one possessing special value because of its accessibility and ease of application.

THE PRESIDENT'S ADDRESS.

Dr. W. Goodell, of Philadelphia, delivered an able and interesting address, in which he first paid a merited tribute to Dr. E. R. Peaslee and Dr. W. L. Atlee, Fellows who had died within the past year. Then followed a brief review of last year's work as shown by the volume of Transactions. A compliment was given to Dr. S. Billings, of the U. S. A., for the bibliography which accompanied the volume. In looking over the contributions, it was noticeable that nothing could be found on diseases of childhood, and also there were social problems of the day which ought to be boldly confronted, such as preventive measures, criminal abortion, sexual excesses, dress, etc. One subject demanded especial attention, and that was the care of children among the poorer classes.

The doctor then passed to the consideration of the subject of

NERVE-TIRE AND WOMB ILLS; OR, THE RELATION OF NEURASTHENIA TO THE DISEASES OF WOMEN.

In his opinion there was a tendency in the young, yet brilliant school of gynecology to make too much of the womb and its annexes as the cause of so-called female disorders. Many disorders of the reproductive apparatus did not constitute the essential disease, but were merely the local expressions of general neuroses. The girl at school, wearied beyond measure by the slightest exertion, either mental or physical, finally became hysterical, and in her all forms of disease were assimilated. No good came from local treatment, nor did such patients respond much better to ordinary therapeutic measures. Such cases were an opprobrium to the profession, and to remove that opprobrium was the object of the address. It could be done by a plan of treatment first devised by Dr. S. Weir Mitchell in his work on *Fat and Blood, and How to Make Them.* Of that plan, rest, massage, seclusion, electricity, and feeding were the essential features. Dr. Goodell then related the history of some remarkable cases, in which the symptoms were such that ninety-nine out of one hundred physicians would ascribe them to uterine disease alone, and yet they recovered with little or no local treatment. The essence of the disease in such cases was not in the sexual organs, but in the nervous centres. Those emotional creatures gave a history of exhaustion and wakefulness, of great nervousness, and of constant backache and ovaralgia. The things to be secured in the treatment were nutrition, sleep, rest of body and mind, and freedom from pain.

A vote of thanks was extended to the President for his able address, and the Society adjourned to meet at 3 P.M.

(To be continued.)]

Correspondence.

HOMŒOPATHY AND EXCLUSIVISM.

To the Editor of The Medical Record.

Dear Sir:—In your last editorial—September 28th—you dwell on "coincidences and similarities of expression" as if such accidents were surprising! Why, sir, we have no doubt that if the "majority of the County Medical Society" should speak, you would find even a more remarkable display of "coincidence and of similarity in the language and in the ideas expressed" to those of "Medical Ethics" and "One of the Majority."

You now make it clear that you are not in favor of any recognition whatsoever of the "so-called liberal homœopaths" until they have obtained a status as "regulars," which, you wisely add, should be based on "a good education, a good moral character, and a renunciation of exclusivism," and express surprise at its having escaped "clear-headed Medical Ethics." Possibly he held views similar to ours, and took it for granted that you, as well as others, would understand it by implication.

There is one point you have raised in your editorials, and in your last one reiterate with increased force. It is that "the Society *stultified* itself by its vote"—in plain English, made a fool of itself by rejecting the nonsensical report of the Comitia. As if the whole profession did not know that any one who recognized the entire domain of science as the sole basis of practice could not possibly be considered an "exclusive." Why, sir, the report of the Comitia was impertinent to the sense of the Society; for it was, in fact, to all honest men, meaningless in its application—practically abortive. The question asked plainly "if the ban of exclusiveness, as regards consultations with the so-called liberal homœopaths, was removed?" It called

for a direct answer, "either yes or no," and not a circumlocutory platitude. In creating "the loop-hole to which allusion has so often been made," the. Comitia did, in fact, *stultify the purpose of its existence*, which is not only to guard the letter of the Code, but its *very spirit*.

We agree with you as to the grandiloquent expression of "Senex," in reference to freedom of thought and liberty of speech, being the merest cant, and are surprised that "clear-headed Medical Ethics" should have taken any notice of it, for "apparent sincerity degenerates into transparent hypocrisy."

Yours truly,

ONE OF THE MAJORITY.

[And still our general opinions, as already expressed, are unchanged.—ED.]

CHLORAMYL, A NEW ANÆSTHETIC AND AN IMPROVED INHALER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—Having had considerable experience in the administration of the various anæsthetics in use at the present day, viz., chloroform, ether, etc., and not feeling satisfied with the safety, or rather *unsafety* of chloroform, or with the many faults of sulphuric ether, which so nearly counterbalance its comparative safety as to preclude its use in favor of chloroform in many cases, I have therefore experimented with various compounds in the hope of discovering a new and better anæsthetic.

Early in the month of April, 1877, while treating an asthmatic patient with the nitrite of amyl, I became impressed with the idea of augmenting the heart's action with this drug, and thereby *preventing* the tendency to syncope and asphyxia, from paralysis of the heart, in cases of chloroform narcosis.

I then began a series of experiments upon animals, first administering chloroform and then the nitrite of amyl. Then I began to mix them for use, aiming to get such a proportion of the amyl as would just counteract the paralytic effect of the chloroform. I found that while pure chloroform (Squibbs') would mix readily with the nitrite of amyl, producing a fine clear solution, the chloroform of other manufacturers was unsatisfactory, leaving a milky solution of unpleasant odor. Continuing my experiments, I came to the conclusion that a quarter of an ounce of the nitrite of amyl to the pound of Squibbs' chloroform was about the proper strength, and that the combination was far safer for general anæsthetic purposes than chloroform uncombined; indeed, in my hands, and in those of others, so far as tried, it seems to be fully as safe as sulphuric ether, and far more pleasant in its administration, possessing all of the advantages of pure chloroform, but without its dangers.

Upon becoming satisfied of the value of my discovery, I named it chloramyl. I first administered chloramyl to persons in June, 1877, as follows: June 6th, I administered the compound to Charles Detrick, a young, healthy man, for the purpose of dressing a badly crushed thumb, both the patient and bystanders being wonderfully pleased with its operation. Next, June 16th, I gave it for amputation of a finger; then. June 18th, for extraction of a tooth; since which time I have employed it (chloramyl) in a great variety of cases in both surgical and obstetrical practice. I find that patients usually take it better than chloroform alone, and so far there has not been the first indication of danger from its use. In exhibiting chloramyl, the patient's face becomes flushed much sooner than with chloroform; but press the drug right along and the countenance does not become pale. Both the heart's action and respiration are kept up thoroughly throughout the anæsthesia. I have given this prescription to several physicians, and induced them to try the chloramyl with the most satisfactory results. I have also (last month) communicated the same to Professors Maclean, Dunster, and Frothingham, of Michigan University; and have reported my discovery to the Cayuga County N. Y. Medical Society.

Having noticed lately several communications in the columns of the RECORD, from Dr. F. A. Burrall and others, on the use of amyl nitrite as an antidote to chloroform in cases of poisoning, I concluded to publish my discovery. As Dr. Burrall states in his article in the RECORD of July 20th, "With our present knowledge of the antidotal properties of amyl nitrite in relation to chloroform, it is but justice to our patients to have it at hand when chloroform is administered." I agree with him that we should have it at hand, but not in a separate bottle, to use *after the danger has become imminent*, but (as it produces no ill effects) *mixed with the chloroform*, in such a proportion as to prevent the approach of danger, by both syncope and asphyxia; for such I claim to be the effect of this combination, and as such I give chloramyl to the medical profession, asking that it may be given a full and fair trial, and trusting that it may become the humble instrument in other hands of saving human life. Not that I would detract from the honors due the inventor of chloroform, for it was a grand invention; but if we can relieve its administration from the embarrassment and danger which have heretofore attended its use, will it not indeed be a great boon to humanity?

The formula I use for chloramyl is

℞. Squibbs' chloroform..... 1 lb.
Nitrite of amyl..... 2 drachms.
Mix.

But I would suggest that the amount of nitrite of amyl be diminished in long and tedious operations, and on farther trial it may prove best to vary the proportions, the point aimed at being to use just sufficient amyl nitrite, to counteract the paralytic effect of the chloroform.

GEORGE E. SANFORD, M.D.

FIVE CORNERS, Cayuga County, N. Y.

THE ROLL OF HONOR.—The following physicians have died while in attendance upon yellow fever patients since the last report:

Memphis, Tenn.—Sept. 25th, Dr. P. Burcham, volunteer from Columbus, O.; Dr. Langdon A. Cherviss, volunteer from Savannah, Ga. Sept. 29th, Dr C. S. Roberts, volunteer from Sulphur, Ky.; Dr. P. Tuerke, volunteer from Cincinnati, O.; Paul H. Otey.

Vicksburg, Miss.—Sept. 26th. Dr. J. S. Roach.

New Orleans, La.—Sept. 25th, Dr. George W. Kibbee, volunteer from New York. Sept. 28th, Dr. Morley. Sept. 29th, Dr. J. Theus Taylor, volunteer from New York.

Holly Springs, Miss.—Sept. 25th, Dr. J. W. Fennell. Sept. 26th, Dr. Lewis, volunteer from Denison, Texas; T. D. Manning, volunteer from Austin, Texas.

Hickman, Ky.—Sept. 27th, Dr. J. W. Farris, volunteer from Missouri.

Milan, Tenn.—Sept. 22d, Dr. J. G. Boyd.

Grand Junction, Tenn.—Sept. 28th. Dr. Newton Adams Lindley, volunteer from New York.

Previously reported, 48. Total to date, 63.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 28, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Sept. 21, 1878.	0	29	25	3	6	24	0	1
Sept. 28, 1878.	0	17	28	0	1	18	0	0

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE. WASHINGTON. D. C., Sept 28, 1878.

NATIONAL QUARANTINE REPORT.—Abstract of sanitary reports received during past week under the National Quarantine Act:

New Orleans.—During week ending yesterday evening there were 926 cases of yellow fever and 332 deaths. For the last twenty-four hours there were 124 cases and 51 deaths. Total cases, 8,464; deaths, 2,700.

South Pass, La.—There had occurred to the 26th inst. 42 cases of yellow fever and 2 deaths.

Morgan City, La.—For the week ending yesterday evening there were 79 cases of yellow fever and 12 deaths. Total cases, 145; deaths, 30.

Baton Rouge, La.—From Sept. 20th to 9 A.M. the 26th there were 221 cases of yellow fever and 7 deaths. Total cases, 893; deaths, 46.

Plaquemine, La.—During the week ending Sept. 15th there were 16 deaths from yellow fever. 130 cases were still under treatment. The first case occurred August 1st. Total cases to Sept. 15th, 305; deaths, 53.

Pass Christian, Miss.—12 cases of yellow fever and 2 deaths occurred during the week ending yesterday evening. Total cases, 33; deaths, 3.

Biloxi, Miss.—There were 5 cases of yellow fever and 1 death during the last week. Total cases, 25; deaths, 8.

Mississippi City, Miss.—8 cases of yellow fever and 1 death occurred last week.

Ocean Springs, Miss.—During the week ending yesterday evening 9 cases of yellow fever occurred and 5 deaths. Total cases, 60; deaths, 17.

Bay St. Louis, Miss.—There were 53 cases of yellow fever and 15 deaths during the week ending yesterday evening. Total cases, 78; deaths, 20.

Water Valley, Miss.—During the eight days ending Sept. 21st there were 18 cases of yellow fever and 5 deaths. Total cases to that date, 21; deaths, 7.

Vicksburg.—58 deaths from yellow fever during the week ending yesterday evening, 14 of which occurred in the last twenty-four hours. Total deaths to date, 779. Assistant-Surgeon Keyes reports: "Epidemic over, save a few sporadic cases."

Greenville, Miss.—Out of a remaining population of 450, 227 have died of yellow fever; 60 persons are now sick with the fever, mostly convalescent, and "material for new cases exhausted."

Grenada.—Since last report there have been 10 new cases of yellow fever and 3 deaths. Total deaths to yesterday evening, 274.

Port Gibson, Miss.—Total cases of yellow fever to last evening, 620. Total deaths, 110.

Memphis.—Deaths from yellow fever for the week ending Sept. 26th, 297. Total deaths, 2,428.

Brownsville, Tenn.—During the week ending yesterday evening, 67 cases of yellow fever and 22 deaths occurred. Total cases, 197; deaths, 66.

St. Louis.—During the past week, 4 deaths from yellow fever at Quarantine. None in the city. Only 2 cases now under treatment at Quarantine.

Cairo, Ill.—During the last week there were 2 cases of yellow fever, one of them a refugee. Total cases, 14, and 6 deaths.

Louisville, Ky.—18 cases and 10 deaths from yellow fever occurred during the week ending Sept. 27th. 9 cases and 5 deaths were among the inhabitants living within two or three squares of the Louisville & Nashville depot, where some unclaimed baggage of refugees had been stored. The first case among the inhabitants occurred Sept. 23d. Total cases, 95; deaths, 36.

Cincinnati.—No new cases nor deaths from yellow fever within the last week.

Gallipolis, Ohio.—Since last report to Sept. 24th, 3 new cases of yellow fever and 5 deaths have occurred. Two of the new cases are not traceable to the steamer "Porter." Total number of cases, 31; total deaths, including the 6 on the "Porter," 17.

Chattanooga, Tenn.—A refugee was taken with yellow fever Aug. 21st, and another Sept. 6th. The first case among the inhabitants occurred Sept. 18th. Total cases to last evening, 41; deaths, 26.

Mobile, Ala.—From Sept. 20th to the evening of the 24th there were reported to the Board of Health as yellow fever 11 cases and 7 deaths.

Key West, Fla.—No new cases of yellow fever the past week.

One refugee died of yellow fever in Dayton, Ohio, Sept. 21st.

One case of yellow fever occurred in Philadelphia, and one in Richmond, during the same week; both were refugees from the South.

Yellow fever prevails in a number of small towns in Louisiana, Mississippi, Tennessee, and Kentucky, from which definite information of the number of cases and deaths has not been received. The fever is reported as spreading to the plantations.

Havana, Cuba.—For the week ending Sept. 21st there were 31 deaths from yellow fever, and 9 from small-pox.

Rio de Janeiro.—From 14 to 22 deaths from small-pox occur daily. No other contagious disease prevails.

Morocco, Africa.—Advices from Fez and Mequinez to Aug. 24th are to the effect that the cholera is decreasing. Small-pox prevails in the ports of Magador and Saffi. In the latter port about 15 deaths occur daily from that disease.

Calcutta.—10 deaths from cholera, and 17 from small-pox, week ending July 27th.

Bombay.—32 deaths from cholera, week ended Aug. 6th.—JNO. M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

THE YELLOW-FEVER COMMISSION.—The Commission to which reference is made in our editorial column has been appointed by the Supervising Surgeon-General of the Marine Hospital Service, Dr. John M. Woodworth, and consists of the following gentlemen: Prof. S. M. Bemis, M.D., of New Orleans; Jerome Cochran, M.D., of Mobile; and Prof. E. Lloyd Howard, M.D., of Baltimore. The major part of the expenses of the Commission are to be met by Mrs. Elizabeth Thompson, of this city.

Original Lectures.

HYDATIDS OF THE LUNG.

CLINICAL LECTURE DELIVERED IN UNIVERSITY MEDICAL COLLEGE.

By PROF. ALFRED L. LOOMIS, M.D.

(Reported for THE MEDICAL RECORD.)

GENTLEMEN:—This case is one of unusual interest. The patient has been brought to us from Charity Hospital. Without indicating to you the character of the disease, I will carefully take his history, and with your assistance, if possible, reach a diagnosis. He states that he is a native of Ireland, a shoemaker by trade, is 43 years of age, and has no hereditary tendency to disease. At 19 years of age he had his first attack of inflammatory rheumatism. This lasted two months. All the large joints were involved. He has had several similar attacks at intervals of from one to four years, the length of the attacks varying from one to three months.

In 1875, after an attack of rheumatism, he had a carbuncle on his neck, which was followed by chills and fever. He now noticed for the first time some swelling of the feet and ankles, and palpitation of the heart on exertion.

In September, 1876, he suffered from unusual cardiac palpitation, accompanied by severe paroxysms of coughing, and for the first time in his life he "raised blood." The spitting of blood continued almost without intermission until Jan. 10, 1878; the blood was bright red, and varied in quantity from one to two tablespoonfuls. During this time, nearly every day, he raised some blood. On the 10th of January, 1878, he began to spit up much larger quantities of blood than ever before; from Jan. 10th to Jan. 18th he thinks he raised as much as eighteen pints of blood. On Jan. 18th, after a violent fit of coughing, he raised something which had the appearance of membrane—it was partly white and partly red; afterward he raised other pieces, some of which looked like little sacs. Each time he expectorated a piece he would spit up a large quantity of bright-red blood.

He lost little flesh previous to the month of January, 1878. During the time that the profuse hemorrhages continued he lost flesh very rapidly and became very weak. Three weeks after the first profuse hemorrhage (during the early part of February), he again coughed up membrane and had another profuse hemorrhage; for three days he had these hemorrhages. At this time when he coughed up the membrane, he says, for the first time he had a sensation as though something was being torn out of the inside of his chest. The membrane came up in quite large pieces, and after raising it he experienced a sensation of relief. Since this time he has raised no blood, nor has he expectorated any more membrane. He coughs a little and has a slight muco-purulent expectoration; has steadily gained in flesh and strength, and as you see now looks quite well. The palpitation of the heart, which has troubled him more or less for the past two or three years, is less than at any time within that period. His urine gives negative results. With this history, gentlemen, before we enter upon a physical examination of this patient, I will ask you for a diagnosis. There are two prominent symptoms presented to us, viz.: spitting of blood and cardiac palpitation.

What was the probable cause of the hemorrhage?

The suggestion has just been made to me that it was probably caused by disease of the heart which had been developed during some of his attacks of rheumatism.

It is quite possible that the earlier and smaller hemorrhages of which this patient speaks may have depended upon some mitral lesion, for such hemorrhages are usually small in quantity and sometimes continue for a long period, but some other explanation must be found for the profuse arterial hemorrhages which occurred during January and February. Besides, the blood which is spit up in connection with pulmonary hemorrhages depending upon heart lesion is usually of a dark color.

Again, the suggestion is made that the hemorrhages may have occurred as the result of the separation of a fibrinous exudation in the bronchial tubes from a fibrinous bronchitis. The expectoration of pieces of membrane in connection with the hemorrhages seems to favor such an explanation; but the hemorrhages which occur under such circumstances are usually small in quantity—I have never known them to exceed two or three tablespoonfuls; besides, the membranes expectorated are usually casts of the bronchial tubes. Only a microscopical examination of portions of the membrane expectorated will settle whether this is or is not the case.

Again, it is suggested that the hemorrhages may have been simple bronchial hemorrhages such as are met with in the early stage of pulmonary phthisis. It is a fact that such hemorrhages are often profuse and occur at intervals, but membranous expectoration in connection with such hemorrhages never occurs. The long-continued palpitation of which this patient complains is presumptive but by no means conclusive evidence of cardiac disease, as we often meet persons who complain of such palpitation in whom no cardiac disease exists. From the history of this case we are unable to reach even an approximate diagnosis. We will therefore proceed to a physical examination of his chest.

On *inspection*, the right shoulder is noticed to be lower than the left, and there is slight retraction of the right side more marked posteriorly than anteriorly. The motion of the right side during respiration is markedly diminished. The apex-beat of the heart is plainly visible one inch to the left of its normal position and over an abnormal area.

On *palpation*, vocal fremitus is more marked on the right than on the left side, especially in the mammary and in the superior axillary region.

On *percussion*, there is a loss of pulmonary resonance over the entire right chest, most marked in its lower portion.

On *auscultation*, exaggerated respiration is heard over the entire left lung. On the right side, below the nipple, there is almost entire absence of respiratory sound. On a line with the nipple, bronchial respiration is heard over the right infraclavicular space; the respiratory murmur is heard feebly and is high pitched. To recapitulate briefly:

First.—We have marked diminution of the right thoracic cavity (retraction of the chest-walls on the right side.)

Second.—Increase of local fremitus over the entire right lung.

Third.—Dulness on percussion over the right side, most marked below a line corresponding to the right nipple.

Fourth.—Diminished high-pitched respiration in the right infraclavicular and scapular region; bron-

chial respiration on a line with right nipple, and, below the line, feeble or absent respiration.

From these physical signs we arrive at the following conclusions: 1st. That the retraction of the right side, and the feebleness of the respiratory murmur over the right lung, indicate pleuritic thickenings and adhesions, while the increase in the vocal fremitus over the right side, and the bronchial respiration on a line with the nipple, indicate pulmonary consolidation. 2d. The up-and-down motion of the liver accompanying each respiratory act, and the absence of motion of the chest-walls at the lower portion of the right chest cavity, indicate adhesion of the lung to the diaphragm on its thoracic surface, and of the liver to the diaphragm on its abdominal surface.

Let us now examine the heart. You observe that the apex-beat is an inch below and on a line with the left nipple, and that its visible area and force are abnormally increased. It is accompanied by a tremor which is not purring in character. No murmur is heard at the base nor along the line of the vessels, but at the apex there is a murmur which precedes and accompanies the first sound; the second portion of the murmur is heard in the left axillary region, but is not heard behind at the lower border of the scapula; the rhythm of the heart's action is normal. These physical signs lead us to diagnose disease of the mitral orifice, which causes slight obstruction to the current of blood from the left auricle to the left ventricle, and also allows slight regurgitation to take place from the left ventricle to the left auricle. With this valvular lesion there are evidences of hypertrophy of the left side of the heart.

Upon examination of the hepatic region, we find that the area of hepatic dulness extends two inches below the free border of the ribs, on a line with the right nipple, and the free border of the right lobe of the liver can be distinctly felt below the ribs; it is smooth and rounded. In extent the left lobe appears nearly normal, and manipulation of the liver gives no pain. The area of splenic dulness is slightly increased beyond its normal limits. No tumor can be detected in the abdominal cavity by palpation or percussion. There is no œdema of the feet, nor evidence of fluid in any cavity. The pulse and temperature are normal.

Now, gentlemen, with the history of this case and the results of our physical examination before us, it is evidently still impossible for us to reach a diagnosis. We know the patient has a moderate mitral regurgitation with pleuritic thickening and fibrous induration of the lower portion of the right lung, yet these are not sufficient to account for the symptoms which he has given us. To briefly review the case: here is a man who has had more or less hemorrhage from his lungs for a year; the blood expectorated has been of a bright-red color; at certain periods the hæmoptysis has been profuse, and he has coughed up considerable quantities of a substance resembling membrane; in one or two instances this membrane was in the form of a sac. When this membrane substance was expectorated the patient was in an hospital, under the care of a careful observer, who examined it microscopically, so that we are not in doubt as to its exact anatomical structure, and thus we are greatly aided in our diagnosis. As I have already stated, the history and the description which the patient has given us would very naturally lead us to think the disease might be fibrinous bronchitis, in the course of which disease membranous casts and portions of membrane, more or less firm in character, are often expectorated. Yet, in this case, several competent microscopists have examined the membranous material expectorated, and have found it a portion of, and, in some instances, a complete hydatid cyst. Within these cysts, and adherent to their walls, were found minute white particles, which under the microscope proved to be "echinococcus hominus," and by these the exact nature of the membrane was established beyond doubt.

Hydatids of the lung is one of the rarest of pulmonary affections. This is the second case I have seen. It is possible for hydatid cysts to be developed primarily in the pulmonary substance; usually they find their way into the lung from the liver. When developed in the lung, they may exist for some time without causing any very marked disturbance; but as they gradually enlarge, they exert pressure on the surrounding lung tissue, and may occasion hæmoptysis, bronchitis, pneumonia, or, perhaps, gangrene of the lung. In some instances they have caused perforation of the pleura and pneumothorax; they have also made their way through the diaphragm into the peritoneal cavity. As they enlarge and excite bronchitis, pneumonia, or pleurisy, the general symptoms, and physical signs of these diseases will be developed, but, unless some portion of the hydatid be expectorated, or the hooklets of the "echinococcus hominus" be discovered by a microscopical examination of the expectoration, there will be nothing to point to the true nature of the disease.

When the cysts make their way into the lungs from the liver, in most cases the pulmonary symptoms will be preceded by hepatic symptoms, followed by a more or less severe attack of pleurisy. The patient is seized somewhat suddenly with extreme distress and great dyspnœa; the countenance becomes anxious, the features collapsed; the face becomes more or less livid, the extremities cold and clammy; vomiting occurs, and by degrees the patient becomes more or less deeply jaundiced. With these symptoms, the physical signs of pulmonary consolidation are followed by those of excavation. The expectoration changes from that of slightly rusty-colored mucus to a bile-stained, muco-purulent matter, or to a dark-brown, fetid fluid, containing shreds of lung-tissue and portions of hydatid cysts. The pressure of the hydatid cysts on the hooklets of the echinococcus, as in this case, is the only distinguishing mark of the disease. The general symptoms and the physical signs might be simply those of hepatic abscess making its way through the lungs. We do not know with positiveness how the hydatids pass from one organ to another. Some are of the opinion that their germs are carried by the blood from one part of the system to another; others maintain that they pass directly from one organ to another by their inherent motive-power. If they pass in this latter way from the liver to the right lung, as they pass through the diaphragm, they must excite a more or less severe pleuritic inflammation, binding the pulmonary pleura to the diaphragm and pleura, and, as they enter the lung, exciting a more or less extensive pneumonic inflammation in the lung substance.

In the case before us probably this has not occurred, for there have been no hepatic symptoms either preceding or accompanying the pulmonary. Although the right lobe of the liver is enlarged, or occupies more than its normal area, no cystic development can be detected in its substance. I am aware that a single hydatid cast might occupy the central portion of the right lobe of the liver, and we might not be able to detect its presence; but, if it passed from the liver into the lung, its passage must be indicated by well-marked and easily recognized he-

patic symptoms. Although hydatid cysts may be found in the lungs, spleen, omentum, and other parts of the body, yet, almost without exception, the parent cyst is in the liver. When these cysts are developed in the lungs, they are first found in the small bronchial tubes, where they excite inflammatory processes in the adjacent lung-tissue, and finally, by their rupture and separation, cause hemorrhages more or less profuse. If they pass from the liver into the lungs, the inflammatory processes and hemorrhage may have been directly caused by their passage. It seems probable that the patient before us has now no cysts in his lungs, for he has had neither hemorrhages nor pulmonary symptoms since he last expectorated cysts, four weeks ago, previous to which time they have been present ever since his first hæmoptysis, which occurred more than a year ago. Within the past four weeks his general health has steadily improved. He has gained flesh, and is almost entirely free from his cough. In all instances where hydatids have been met with in the lungs, the result has greatly depended upon the seat of their development. When they are developed in the pulmonary organs, statistics show that, although the symptoms which attend their rejection are very severe, and may continue for many months, yet recovery takes place in about one-half the cases; whereas, when they make their way into the lungs from the liver, the constitutional disturbance is so great as to leave little hope of recovery.

Treatment is of little avail in cases of intrahydatids. We know of no means by which the cysts may be destroyed or assisted in their expulsion. The only means of service to our patient are those which are calculated to relieve pain, assist expectoration, and sustain the failing powers of the system. Opium, ether, and alcoholic stimulants are generally indicated, and counter-irritants are often useful in relieving the local inflammation. Tonics must be given freely, and the strength sustained by a nutritious diet.

CLINICAL LECTURE ON FRACTURE OF THE NECK OF THE FEMUR.

DELIVERED AT THE BUFFALO GENERAL HOSPITAL.

By CHARLES C. F. GAY, M.D.,

SURGEON TO THE HOSPITAL.

CASE OF A GIRL ÆT. EIGHTEEN YEARS, WITHOUT HISTORY OF INJURY—SHORTENING AND EVERSION OVERCOME BY BREAKING UP OLD ADHESIONS AFTER EXISTENCE OF FRACTURE OF NEARLY THREE MONTHS' DURATION — INTERCURRENT RHEUMATISM — TREATMENT—RESULT.

GENTLEMEN:—During my present term of service, there have been under treatment in this hospital four cases of fracture of the neck of the femur, which have presented no complications nor afforded any interest aside from the mere fact of the existence of fracture, all of which have terminated in recovery; but we now have a fifth case in the female ward which has attracted much attention and excited much interest from the fact that no cause has yet been assigned for the existence of the hip lesion. The house surgeon, Dr. Stockton, has preserved notes of the history of this most interesting case, which he will now be so kind as to read.

Kate Speigle, æt. 18 years, domestic, American, of Irish parentage, entered the hospital January 19, 1878; had been sick since December 29, 1877; taken at night with acute pain in shoulder. In morning it had changed to the inner side of the thigh, well up. Part was inflamed and very painful. Her physician "suspected spinal fever," or saw, rather, such premonitions. Later, it was thought that dead bone was the active agent, and an abscess anticipated. Thigh was swollen and sensitive; the knee well flexed, and to move the leg caused much pain in the thigh. Investigation showed that she had an abscess in the thigh when five years old, which her parents attributed to measles, but it was afterward ascertained that after this the patient had a fall on the pavement, and was immediately after confined to bed with the abscess.

This was the only illness she had experienced. After mature consideration, it was decided that the patient was suffering from rheumatism, and she was given salicylic acid, grs. x., every two hours for forty-eight hours, and then grs. x. every four hours for several days, with anodynes to quiet pain. Pulse at the time of entrance to hospital and afterwards was, January 19th to 29th, A.M.: 94, 114, 100, 102, 120. 100, 98, 100. P.M.: 108, 90, 90, 91, 108, 110, 116, 100.

Temperature ranged from 99¼° to 101½°. Inflammation subsided at once by use of the acid Rochelle salt being given as a laxative. In a few days swelling appeared in the knee-joint, which pitted on pressure and presented all the signs of rheumatism.

January 30th.—Vin. colchici sem., gtt. xv. every four hours, given in place of salc. acid. Rheumatism gradually subsiding. March 4th, rheumatism well.

To-day, March 4th, Dr. Gay was requested to visit this patient in consultation, who, upon measuring the leg, found that there was a shortening of two inches and the foot greatly everted, and while upon the sound side the distance from the greater trochanter to the anterior spinous process was five inches, upon this side it was seven inches. Dr. Gay thereupon remarked that there were at least two signs present of fracture, viz., shortening and eversion, and advised extension. March 10th.—Extension by weight and pulley—twelve pounds—continued several days. It relieved her pain, and it was thought the foot took a more natural position. March 14th.—The patient was transferred to the surgical ward (service of Dr. Gay). March 23d.—The leg was manipulated by Dr. Gay in the presence of several medical gentlemen and students, which resulted in lessening the distance from the trochanter to the anterior superior spinous process of the ilium from seven inches to four and one-half or five inches. Foot was also brought into natural position and readily retained there. Extension was again applied, eight pounds weight being used. Before manipulation she was partly etherized, but took the anæsthetic very badly, so that insensibility to pain could not be established perfectly with proper regard to safety. She was removed to a hard bed and given morphia, gr. ¼. Pulse from March 23d and after was, P.M.: 158, 130, 108, 118, 118, 120. A.M.: 160, 130, 108, 118, 118, 120. Temperature, A.M. and P.M. the same, viz.: 102½°, 102°, 101°, 101¼°, 99°. Some dyspnœa and pain in chest, and slight hæmoptysis occurred the succeeding evening. Digitalis was given; gradually improved; leg felt well save some pain in hip-joint; morphia given.

April 1st.—There has been steady improvement in general and local condition. April 8th.—Leg is three-fourths of an inch short.

The patient says her father had told her that this limb was always the shorter since the "abscess." Her mother did not know it, and no positive proof was given.

Since the report of Dr. Stockton was written, some further knowledge has been gained respecting the his-

tory of this case, obtained from the mother of the girl. It appears that Kate was away from home working as a laundress; that she stood at the table all day, on the Saturday before New Year's, ironing, and that at six o'clock she became disabled, and was put to bed, and that in one week and a half was conveyed to her home, where she remained three weeks before coming to the hospital; and that she placed her hand upon her hip, and declared that her leg was broken.

The mother further states that, when her daughter had the abscess upon the thigh, the girl was attended by a midwife, and that the abscess spontaneously opened; that she was laid up eleven weeks, then got up, and walked as well as she ever did.

Kate says she never knew there was any difference in the length of her limbs; that she never went lame, and that her foot turned out no more upon one leg than the other. She furthermore says she took the position from the first with the foot turned out, because it was the most comfortable to her, and both mother and daughter say she was never able to move the limb from the day she became disabled.

The parents are both healthy, never had rheumatism, and Kate never had any other sickness than the measles and abscess, and has always been remarkably healthy and strong.

Now you want to know if I am able to account for the shortening and eversion of this patient's limb, and if there be fracture or dislocation, how it is possible for one or the other to occur without first having sustained injury. If it be true that this girl has a fracture of the neck of the femur without having sustained any known injury, and it has remained unrecognized eight or ten weeks, it becomes a most remarkable case, a full report of which should go on record. The girl seems entirely truthful and honest, and there is certainly no reason why she should conceal the fact of injury, if any injury had occurred. There is no motive for concealment.

Now, the first subject that attracts attention in connection with this case is that of rheumatism. Rheumatism is often a concomitant to injuries of joints. It is an intercurrent affection or is consecutive to joint injuries, or injuries occurring in the vicinity of and involving the joint structures. But in this case, if we are obliged to admit that no accident happened to this person by which her leg was broken, then the rheumatism becomes the primary affection, and we are led to suppose that acute rheumatic arthritis had induced interstitial change or softening to the extent of causing absorption of the neck of the femur, with, perhaps, epiphyseal separation and consequent shortening. Fortunately, the figures preserved by the house physician of the temperature and frequency of the pulse during which it is affirmed the patient had rheumatism, and the temperature and frequency of the pulse for some days subsequent to the manipulations, throw some light upon this subject, for it will be observed that upon no day during the rheumatic fever, from its invasion till its termination, did the pulse and te nperature rise so high as they did for several days after the manipulations. During the rheumatic attack the pulse reached 120 per minute, and this only for one day; the temperature did not exceed 101½°, while the day after manipulating the limb the pulse stood at 158, the next day at 130, and the temperature rose to 103°. These figures are strikingly significant, and point to possible error in diagnosis; but having all confidence in the judgment of the medical attendants, I do not raise any question of doubt as to the correctness of the diagnosis. During the inhalation of ether it was observed that the pulse became very rapid, and much caution was used in the administration of ether.

The frequency of the pulse remaining for two or three days was at the time attributed, but perhaps erroneously, to the effects of etherization.

From the history of this case, the occurrence of abscess upon the thigh, the fall upon the pavement when five years of age, striking upon the hip, together with the father's assertion that the leg was always shorter than the other, it might be inferred that the girl, in her earlier life, had hip-joint disease, to which is now superadded acute rheumatic arthritis, were it not for the fact that the patient had never limped or suffered pain in the hip; that the limbs were of equal size; that there was never eversion of the foot, and, according to the patient's own statement, that she never knew any difference in the length or strength of her limbs, but that "one was as good as the other," until her present disability.

Our Philadelphia friends have demonstrated, in the case of Haire *vs.* Reese (McClelland's "Civil Malpractice," p. 92), that, without fracture, shortening occurs by *interstitial absorption* from inflammatory softening, the result of contusion of the hip. "Numerous pathological specimens from the museums of Philadelphia" are presented to illustrate such a case.

Simple contusion certainly could not cause such result as we find in this case by falling upon the sidewalk or pavement when the girl was but five years of age, since there followed no symptoms of hip-joint disease. Contusion could not later have occurred without the knowledge of the girl herself. Had she received a blow at any time or fallen upon the hip, causing contusion which disabled her, a fracture would doubtless have been immediately recognized, and the subsequent perplexities which have environed the diagnosis would not have existed.

There is no way of accounting for the two inches of shortening of this patient's limb but by the existence of fracture of the neck of the femur or coxo-femoral luxation. As to causation, we shall probably be forever unable to gain any more light than that we now have.

Suprapubic luxation is the only one accompanied by eversion and shortening, and it is easily recognizable by feeling the head of the femur, which forms a prominence upon the pubies, and when felt by the hand is demonstrative evidence of the existence of dislocation.

In dorsal dislocation we have inversion,* but if, as an exceptional case, persistent outward rotation should exist which would carry the trochanter far away from the spine of the ilium, we should have what I have never yet met with.

I do not think it possible for the trochanter in coxo-femoral dislocation to be separated so remotely from the iliac spine as we find it is in this case. This degree of separation can only occur in fracture; therefore it is legitimate to conclude that it is impossible for luxation to exist, while it is quite certain that fracture of the neck of the femur does exist.

Now it will be found much more difficult to differentiate fracture and dislocation in a chronic than in an acute case. In a recent case of intra- or extracapsular fracture, you extend the limb, then rotate it, and you will get crepitus, unless the fracture be impacted, and this one sign determines the diagnosis. In an unrecognized or chronic fracture of some weeks' dura-

* Everted dorsal laxatation occurs when the outer band of the ilio-femoral ligament is severed. (Bigelow.)

tion, the limb cannot be either extended or rotated; it is fixed and immovable; therefore crepitus cannot be obtained. Indeed, the signs of old fracture are transferred from the side of fracture to the side of dislocation, so that if it were possible, as it certainly is, in exceptional cases, for inversion to exist in intra- or extracapsular fracture, we should have all the signs of dislocation and none of the signs of fracture, when fracture actually existed. Now, in the case of fracture of the cervix femoris, I do not think it at all necessary or possible to make a rigid diagnosis between intra- or extracapsular or mixed fractures. I do not think a differential diagnosis at all essential for prognosis or treatment, since the treatment in either case, and in all cases of the old or young or middle-aged, by extension, ought always to be employed, not so much with the view of making the injured limb as long as the sound one, but in order to obtain osseous union or union by as short a ligament as possible, and in order also to relieve the patient of pain, which will be caused by displacement of the lower fragment of bone, causing it to chafe and fret the soft parts, and erosion of the hard parts upon which the fragment of bone rests. It is my opinion that the fracture that we have under consideration to-day is what Gosselin terms a mixed fracture, *i. e.*, a fracture partly within and partly without the capsule, and that having placed the upper and lower fragments in apposition, ossific union is assured.

The manipulations made in your presence on the 23d of March were very similar to those made in the reduction of a dislocation by the flexion method. Three times was the leg flexed upon the thigh and the thigh flexed upon the abdomen, adducted, rotated inward, and extended, without overcoming the shortening and eversion. The thigh was next carried well down upon the abdomen, abducted, rotated outward, and extended, when it was seen that both shortening and eversion were overcome; the limb remaining without restraint in a normal position by the side of its fellow.

During this last manœuvre an impulse was conveyed to the hand such as is felt in the reduction of a dislocation when the head of a dislocated bone suddenly slips into place, and it was accompanied by a sound sufficiently audible to be heard at a considerable distance, and which induced two or three of the medical gentlemen present to believe and affirm that a dislocation had been reduced instead of a fracture, and the normal position of the limb, without restraint, with more than an inch of shortening overcome, furnished additional strength to the convictions of those who leaned to the side of luxation.

The impulse felt and the sound heard were caused by nothing more or less, I believe, than the dislodgement of the lower fragment, which had so long a time been separated from the upper fragment of bone, and their coaptation.

All who were present during the manipulations can bear witness, I think, to the care exercised in order that, if no good could be done, at all events no harm should be done or injury inflicted upon the patient; therefore much force was not employed, and attention, more than once, was called to this fact, for I was determined, at the outset, that no one, *not present*, should be put to the trouble to testify to the probability that the fracture was caused by unnecessary and violent manipulations.

The result, as you well know, has been so successful as to justify the means employed and to excite the gratitude and elicit the thanks of the patient and her friends. This case furnishes you an illustration of the importance of the exercise of proper care and vigilance in your investigations of the lesions of the hip-joint, since, as you have observed from the history, this lesion remained unrecognized for more than two months, during which time the leg was twice examined, at the solicitation of medical attendants, by a surgeon who pronounced it "all right."

Treatment. — Following the operation upon the limb there was of course some pain and swelling at the hip, and in its vicinity, which, however, passed away in three or four days, upon the application of warm water fomentations. During the patient's protracted illness she had taken morphia daily and become addicted to its use. She would call for it often, saying that she had pain in her limb, but its use was discontinued, and soon the complaint of pain was no longer made.

Extension was applied (eight pounds weight) for four weeks, with the foot of the bed raised. Three bands of adhesive plaster, two inches in width, and long enough to embrace the entire circumference of the pelvis and overlap, were carried firmly around and over the trochanters.

These bands have proved most efficient in several instances where I have used them. They are useful, not only in keeping the fragments in coaptation, but also in preventing eversion. Hamilton's long splint for the treatment of intra- and extracapsular fractures could not possibly fulfil the indications for treatment more acceptably than the appliance I have used in this case, and it is much simpler and more easy of application.

In four weeks all appliances were removed, and the patient allowed to get up and walk about the wards of the hospital with the assistance of crutches. She has good motion of the hip-joint with rotation inward and outward as perfect as in the sound limb, with no unnatural tendency to eversion, and with only three-fourths of an inch shortening.

September 24th.—For the past two months this girl has been able to walk about the room without assistance. For any longer walk she uses one crutch. To-day scarcely three-fourths of an inch shortening is shown by careful measurement.

THE HISTORY OF INSTRUMENTS OF PRECISION IN MEDICINE.

BEING PART OF AN ADDRESS DELIVERED AT THE OPENING OF THE ONE HUNDRED AND FOURTEENTH COURSE OF LECTURES AT THE MEDICAL SCHOOL OF THE UNIVERSITY OF PENNSYLVANIA.

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(Reported for THE MEDICAL RECORD.)

THE PULSILOGON — THE CLINICAL THERMOMETER — THE "PULSE-WATCH" — THE STETHOSCOPE — THE MICROSCOPE — THE OPHTHALMOSCOPE, ETC. — THE ELEVATING INFLUENCE OF A KNOWLEDGE OF THE USE OF INSTRUMENTS OF PRECISION.

IN thinking over the causes which have led us by degrees to such changes in medical practice as have made our old means of teaching a mere caricature of what teaching should be, I have come upon a group of facts which have singularly interested me, and which are, I think, not very generally known.

They illustrate the history of instruments of precision in medicine, and show how hard it is, or was,

to introduce into familiar use methods for which the mass of the profession is not ready; while they also show, if I mistake not, how swift it is to seize upon and use them when that time has come.

Until a period so recent as to be almost within the memory of some who hear me, the means of studying disease were limited to what we learned through the unaided sight and touch. For, save to listen to what a patient had to tell, the sense of hearing gave us no help, until we were taught the splendid lesson of what to hear, and how to hear it, by those three greatest of listeners, Avenbrugger, Corvisart, and Laënnec.

The books of the end of the seventeenth century, and of the early part of the eighteenth, in their immense minuteness of detail as to the pulse and the character of the secretions, show how the doctor strove, by almost painful notation of the facts he saw, to enable himself to relate such changes to the essential and more hidden phenomena of disease.

A vast number of the pulses and appearances of tongue and fæces and urine, which are set down in the books of that day, we no longer think of moment, or have learned to group together, or to read more correctly. In fact, the physician had gone as far as was possible for him to go with unaided senses, and he had now to wait until other assistance came to him, and until physics and chemistry were so far advanced as to lend a helping hand.

THE PULSILOGON.

Of the first practical and really available attempt in this way, in the reign of Anne, an almost romantic echo comes down to us from middle-age Italy.

When Galileo watched the lamp swinging in the Cathedral of Pisa, thinking its vibrations to be in equal time, and therefore fit to be measures of duration, he was but eighteen, and had begun, much against his wishes, to study medicine. Desiring to have at once some test of the regularity of the swing of his pendulum, he is said to have used that most wonderful of clocks, the pulse, as a test.

This was a grave moment in the history of medicine. It was the birth of precision; nor can we conceive of a more striking picture than this wonderful boy, in the gloom of the darkened church, intent on a fact which was, by and by, to give to every science the pregnant gift of exact measures of time. It is also interesting to note, in passing, that some forty years later, when near the end of his life, Galileo, in describing the accuracy of his first clock-work, still refers to the pulse as a measure of exactness. "My clock," he says, "will not vary so much as the beat of a pulse."

From using the pulse as a test of the regularity of the pendulum, he seems to have been led, when but a lad, to make use of the pendulum to measure the pulse-rate. His instrument was known as the pulsilogon. The method of using it was most ingenious. Having always a pendulum of equal weight, he set it swinging and then shortened the string or lengthened it, until the beats corresponded with those of the patient's pulse. Then he measured the length of the string, and B's pulse would be represented arbitrarily, but most precisely, by, we will say, ten inches; C's by eight inches. Galileo seemed to have given but little care to the perfection of this invention, and does not speak of the medical use of the pendulum in any of his essays. The most we know of it comes down to us from his pupil Viviani.

A contemporary of Galileo, also an Italian, professor of medicine at Padua, the well-known Sanctorius, described in 1626 several forms of what he also called the pulsilogon. There is little doubt that this was precisely the same instrument that was used by Galileo, and left, through his large-minded indifference, to be appropriated by the first unscrupulous claimant.

THE CLINICAL THERMOMETER.

Meanwhile, Galileo had invented the thermometer, and is said to have applied it to medical uses, as Sanctorius undoubtedly did many years after.

During this brilliant era of Italy, medicine had thus offered to it such chance of gain as came to it not again for many a day.

The use of the thermometer in disease must, in fact, have been quite common, since thermometers of special form were invented for this purpose, and used by tying them on to the wrist. The Grand Duke Ferdinand the Second seems to have been among the most able of those who improved upon Galileo's instrument, and some of Ferdinand's pulse-thermometers were shown in 1876 at the South Kensington Exhibition of scientific instruments.*

THE "PULSE-WATCH."

These inventions served, however, so far as medical progress was concerned, only to illustrate the ingenuity of individual observers, and were without permanent influence; perhaps because the methods used were difficult, and involved costly and cumbrous apparatus; perhaps because the profession was not yet so educated as to be able to make practical use of them.

Be this as it may, the precious gifts were thrust aside, and we hear little again of precision in observation, until in the reign of Anne, 1707, appeared a book which is little known, almost never read, and which contains an account of a new effort to introduce into medicine an instrument of precision. You will feel, perhaps, some sense both of surprise and of amusement, when I tell you that it was the watch; or, as the inventor, Sir John Floyer, calls it, the "pulse-watch." For, after Sanctorius, until about 1707, scarcely any one counted the pulse accurately, or left on record any statement as to its number, save that it was slow or fast, feeble or bounding, or what not. I do not find that Harvey once mentions the frequency of the pulse, or heart-beat, and in those marvellous pictures of disease which Sydenham drew with a certain artistic breadth of effect, there is a remarkable accuracy of all other needful detail, but not a word as to the frequency of pulse or respiration.

Sir John Floyer dedicates his two volumes, the one to Queen Anne, the other to the Duke of Marlborough, since to the doctor then, as to the purely literary hack, a patron was necessary, until honest old Sam Johnson broke the spell. Sir John says that he tried the pulse at first by the minute in common watches, and by pendulum clocks, but "after met" with what he calls the "sea minute-glass," which may have been used to time the log; "but because," he adds, "that was not portable, I caused a pulse-watch to be made, which ran sixty seconds, and I placed it in a box. I also made a half-minute glass, whose case turns like a dark lanthorn, and that was portable and useful in feeling my patients' pulses, but that differed four

* See Report on Italian Instruments, South Kensington Special Loan Collection, 1876, p. 100 *et seq.* Also Viviani's Life of Galileo, and that by De Nelli. Sanctorius' works are not to be found in any American library; at least there is no copy of his Comm. in Libri Avicennæ, Venice, 1626, which contains details as to his pulsilogon and thermometer.

beats from the minute-glass, which I always kept at home as my standard."

Then, just as we nowadays speak of an instrument-maker, he says, "The pulse-watch here treated of is made and sold by Mr. Sam. Watson, watchmaker, in Longacre, by Sir John Floyer's direction."

With these means Sir John did some good and accurate work in the study of the pulse. He was the first to give the numbers of pulse and respiration in numerous diseases. He studied the frequency of the pulse in old and young, the frequency during rest and exercise, in sleep, and under the influence of baths and of blisters; and he even went so far as to attempt to relate the pulse number to states of the barometer and thermometer. He was often right, and sometimes wrong, but he knew certain facts which have been rediscovered of late years, and he displayed capacities for accurate clinical research which were long wanting after his death. Like a good practical doctor, he gets a passing fling at pure science in the shape of a remark upon the failure of Harvey's discovery of the circulation to influence the practice of medicine.

I presume that in Sir John's day watches with second-hands, giving the duration of the minute accurately, were rare or unknown. For whatever cause, the habit of accuracy in feeling the pulse and determining its number by an unchanging standard did not prosper, and his prediction that this new plan would be sneered at proved only too true. Until the first quarter of the present century definite statements as to the pulse were rare, and the absence of minute-hands, and even of the minute as a universally recognized measure of time, is illustrated by the rare statements in Morgagni, as when he described a case as having a pulse which beat twenty-two times in the one-sixtieth of an hour. It was only when minute-hands had grown common in watches that we come to recognize the now familiar picture of the doctor, watch in hand, a finger on the pulse, the thoughtful face, the anxious lookers-on around the sick-bed.

THE STETHOSCOPE.

This brings us down, as we have seen, to the era of the great French teachers who gave us the stethoscope, and forced a generation to learn over in new aspects everything it believed itself to know about heart and chest diseases. It was, and is, an instrument of precision, because it enables us to isolate the sounds which come from limited regions, but it does not magnify sounds as we may hope to do. Every physician who deserves the name now uses the stethoscope, but, as yet, few men of the mass of physicians have trained themselves to practical use of the many other means which, in later years, have come to our aid.

THE MICROSCOPE.

The microscope has been long known, but it was useless in practical medicine until the micro-chemistry of the tissues and secretions had been so definitely acquired as to become popular property. Even as late as when I was a student, those who could employ the microscope were, so to speak, marked men. To-day, no busy doctor can practice medicine rationally a fortnight without using it, or having it used for him.

OTHER INSTRUMENTS OF PRECISION.

I do not mean to linger over this familar tale. The otoscope, laryngoscope, ophthalmoscope, above all, the various forms of galvanic or induction batteries, the æsthesiometer, and the sphygmograph, have all of them, or nearly all, become a part of the arms of precision with which you are called upon to war against disease.

The list seems formidable, but every one in active practice sees every day cases in which, if he means to know all that can be known of his patient's state, one or more, and sometimes all of them must be used. Contrast such an examination of a patient with that which even a Sydenham felt to be sufficient.

These additions to our means of diagnosis have by degrees made medical practice a handicraft, and while making it precise, and giving us definite standards of comparison, have made it in some sense more difficult.

Our machines are not labor-saving. We employ almost as many tools as the surgeon, and more, and also more complicated ones than are used by some mechanics.

THE ELEVATING INFLUENCE OF A KNOWLEDGE OF THE USE OF INSTRUMENTS OF PRECISION.

To learn how to use the tools of this handicraft in a workshop so delicate and so sensitive as the human body, makes needful such careful personal instruction as cannot be given in the lecture-room alone, and demands the individual training of the student in hospital, dispensary, and laboratory, and by familiar demonstrations.

Future generations of students will go out of these halls fitted by familiarity with such methods to practice medicine as no former graduates have been. It will be their own fault if out of the use of instruments of precision there comes not other good. In war, the rifle, the telegraph, and the telescope have involved the need for greater intelligence in rank and file. In the cotton-mill, the gradual improvement and complication of machines have, I am assured, elevated and, so to speak, educated a large class of operatives. With us, in a higher sense, the use of refined instruments, of accurate and unchanging standards, has created difficulties, and given a training which tends to raise the level of acuteness in the whole range of medical observation, and so to give rise to keener criticism, to more exact care, to a more intelligent patience.

You will see that I, at least, feel sure that the methods to which we are trained by instruments of precision, help to educate us into intellectual habits, which make us more precise in what we look for, and see, and note with our unaided senses.

Very few of the novel questions of the day, such, for example, as the diagnosis of the locality of diseases of the brain, can be answered by the more careless post-mortem studies of past years. I might say, indeed, so far more precise are we to-day that a world of dispute would be saved by agreeing not to quote for the solution of this problem a single post-mortem study made more than ten years ago. There is, in fact, hardly one which is not open to hostile criticism for want of the kind of care which to-day is exacted in all well-regulated hospitals.

Many of you have perhaps been taught that some of the instruments of precision to which I have alluded belong, like the ophthalmoscope, only to the specially trained practitioner. But ophthalmology, which is, with the exception of the dental art, the most perfect as yet of all the branches of practice, has undergone the change which all specialties undergo. It has come to relate itself so widely with general practice, and has invented so many easy methods of rapid research, that it has grown needful, and indeed easy, for the general

practitioner to become to a large degree familiar with portions of it once considered too difficult for common use.

Now that we know what questions the ophthalmoscope readily solves for us, now that we are aware, for example, how many headaches, vertigoes, and other obscure head disorders arise out of imperfections in the eyes, considered as optical instruments working in unison, it is plain that we must more and more strive to learn thoroughly, at least enough for diagnosis, of the modern means of studying the eye. What I have said of this branch of knowledge applies almost equally to the rest.

Original Communications.

COTA BARK IN THE DIARRHŒA OF CHILDREN.

By STOYELL C. PARSONS, M.D.,

VISITING PHYSICIAN TO THE NORTH-EASTERN DISPENSARY.

During the early part of this summer my attention was called to the use of the bark of the quina cota of Bolivia, South America, a drug comparatively unknown to the profession of this country, but which has been very successfully used in Germany and South America.

The advantages claimed for its use are its tonic and specific action without narcotism in the treatment of acute and chronic diarrhœa.

Prof. Wittstein, of Munich, was the first to analyze it in 1875, and found that it contained an alkaloid called cotoïn, which was difficult to isolate, and a resinous substance.

There are several trees of the Cota species, some of which yield paracotoïn instead of cotoïn, the former seeming to bear the same relation to the latter (cotoïn) as cinchonidia to quinia.

Prof. Von Gietl, also of Munich, reports the result in eighteen cases (*Pharmaceutische Centralhalle*, 1876), seventeen of which were successful, the failure occurring in the diarrhœa of pulmonary phthisis.

My first case was that of Ellen D., æt. 32, who had been sick ten days with a constant diarrhœa. At my first visit (August 12, 1878) I found her confined to the bed, quite emaciated, and with a small, thready pulse of 130.

I prescribed grs. v. of the pulv. cota cort. in the form of a pill, and ordered one to be given every three hours.

The next day (August 13th) there were only five or six passages, and they gradually decreased in frequency until August 16th, when the diarrhœa ceased, and she was beginning to feel quite strong.

The result being so satisfactory, I resolved to try it in the diarrhœa of children, but as they will not take pills, and the powder is so irritating to the pharynx, I preferred the elixir.

The number of cases being quite large, I will report a few in full, and tabulate the balance.

Lizzie L., æt. 2 months, had been sick one week, with a passage every half hour; prescribed gtt. viij. of the elixir in a teaspoonful of sweetened water, every hour, and after four doses the diarrhœa stopped.

Margaret W., æt. 1½ years, had been suffering ten days with entero-colitis, having a passage every quarter hour, and could retain nothing upon her stomach; ordered gtt. viij., every fifteen minutes for the first hour, afterward hourly; the discharges stopped at the end of four hours.

Thos. J., æt. 5 months, had been suffering with

	Age.	Time sick.	Passage every	Dose.	Given every	Number of times given.	Remarks.
Ellen D.	32 years	10 days	Few minutes	gr. v.	3 hours	17	Cured.
Lizzie L.	2 months	1 week	½ hour	gtt. viij.	1 "	4	"
Margt. C.	2½ "	1 "	½ "	gtt. viij.	1 "	4	Decreased to 3 per day and then passed from under observation.
Mary McG.	3 "	5 days	½ "	gtt. viij.	1 "	9	Cured.
Jno. C.	5 "	1 week	½ "	gtt. viij.	1 "	8	"
Jas. J.	11 "	4 days	1 "	gtt. viij.	1 "	5	"
Margt. W.	16 "	10 "	½ "	gtt. viij.	1 "	4	"
Jno. J.	13 "	10 "	1 "	gtt. x.	1 "	12	"
Theresa B.	3 weeks	2 weeks	Few minutes	gtt. ij.	1 "	7 days	Decreased to 5 or 6 per day and then passed from observation.
Thos. J.	5 months	10 days	½ "	gtt. vj.	1 "	6	Cured.
Edward D.	13 "	10 "	½ "	gtt. vj.	1 "	10	"
Ann P.	50 years	4 weeks	10 per day	gr. v.	3 "	6	"
Geo. P.	15 months	1 "	20 "	gtt. viij.	1 "	5	"
Julia D.	2 "	10 days	1 hour	gtt. viij.	1 "	1 day	"
Chas. C.	18 "	10 "	½ "	gtt. xij.	1 "	1 "	"
Pat. S.	32 years	1 week	1 "	gr. v.	3 "	6	"
Ann K.	2½ "	2 "	½ "	gtt. vj.	3 "	9	"
Ellen S.	1 "	1 "	½ "	gtt. viij.	1 "	12	"
Jas. M.	1½ "	2 "	½ "	gtt. viij.	1 "	2 days	"
Jno. J.	1½ "	2 "	Few minutes	gtt. x.	1 "	6	"
Mary S.	1½ "	2 "	10 "	gtt. x.	1 "	12	"
Ellen W.	1½ "	10 days	½ hour	gts. x.	1 "	3	"
Carrie D.	¾ "	1 week	½ "	gtt. x.	1 "	1 day	"
Ann G.	53 "	1 "	1 "	gr. v.	1 "	10	"
Albert S.	26 "	3 "	1 "	gr. v.	2 "	8	"
Mary W.	¾ "	1 "	½ "	gtt. x.	1 "	2 days	"
Wm. F.	23 "	2 "	1 "	gr. v.	3 "	9	"
Fred. S.	½ "	1 "	½ "	gtt. x.	1 "	2 days	Died.

entero-colitis ten days; prescribed gtt. vj. every hour, first hour four times, and in six hours it stopped.

Geo. P., æt. 1½ years, had been sick one week with entero-colitis, having about two passages per day; ordered gtt. viij. every hour, first hour four times; in five hours all the symptoms were arrested.

The drug has proved beneficial in every case that has fallen under my observation, excepting one; many of them were apparently hopeless; the failure occurred in a strumous child, Fred. S., with acute bronchitis.

I would cheerfully recommend to the profession the use of this drug.

The forms in which it was used were the compressed pill for adults, and the elixir for children, both of which were prepared and furnished through the kindness of Mr. F. Alfred Reichardt, of this city.

128 East Twenty-fifth Street.

HAY FEVER versus PARALYSIS OF THE DIAPHRAGM.

By WILLIAM C. WEY, M.D.,

Elmira, N. Y.

As I read in The Medical Record of September 21, 1878, the report of a case by Benjamin Edson, M.D., of Brooklyn, entitled "Paralysis of the Diaphragm," I was reminded of an experience in the phenomena of disease, bearing such a close resemblance to the incidents he related, that the conviction was at once forced upon my mind that he had furnished for publication the particulars of an instance of hay fever, somewhat anomalous in character, but compassed by the observation of physicians who have seen much of that disease.

Dr. Edson's interesting narrative of the case concludes as follows, viz.:

"The points worthy of note are:

"1. That the disease is a comparatively rare one.

"2. That in this case it appears on a day more than usually warm in May or June of each year.

"3. The singular fact that it appears *only* in those months—at no other time during the year—and under the conditions stated.

"4. That hydrate of chloral has seemed to have power to modify and to prevent the paroxysms."

These conclusions sustain the inference of hay fever, which in the form presented by Dr. Edson, is "comparatively rare," I must admit; developed, however, under certain influences, imperfectly appreciated, which, applied to this particular case, possessed the power of developing a paroxysm "on a day more than usually warm in May and June of each year," assisted by the "singular fact," which confirms the foregoing, "that it appears *only* in those months—at no other time during the year—and under the condition stated."

The fourth point quoted in reference to the utility of hydrate of chloral in modifying and preventing "the paroxysms," I will not stop to consider, as the observation is as true in its application to a sudden outburst of hay fever as to paralysis of the diaphragm.

Permit me to recall, briefly, the particulars of a case which fell under my observation on the 29th of August, 1877.

A man rang me up at two o'clock in the morning, almost breathless with excitement, stating that his wife, he feared, was dying, and required immediate attention. Upon reaching his house I learned the following history: The patient, a healthy woman, forty years old, retired to bed as well as usual the night before, and quickly fell asleep. Awaking suddenly between one and two o'clock, she experienced such a distress in breathing, amounting to inability to accomplish even a partial inspiration, that she sprang up in bed, gasping, ordered the doors and windows thrown open, and called upon two hurriedly summoned members of the family to fan her vigorously, to aid her efforts to obtain a supply of air. With prominent eyes, dilated nostrils, and her arms thrown wildly around, she presented an appearance of impending death. Her hands and feet were cold, and the heart's action was greatly quickened and very feeble. She had no pain in her chest, and in short, explosive utterances begged to be relieved of the feeling of suffocation which oppressed her, which she had attempted to mitigate by tearing open her night dress, the more readily to obtain the fullest contact of the atmosphere with her body. I proposed a hypodermic injection of morphine, to which her husband would not assent, and I was compelled to give the remedy by the stomach, with hot whiskey, in rapidly repeated doses, at the same time using warm bricks and bottles to the extremities. In the course of an hour the hands and feet grew warm, the breathing became quiet, and the patient dropped back upon two large pillows. Before she lay down I ascertained that the lungs were free from obstruction and the sounds of the heart normal. This lull in the symptoms gave me an opportunity to inquire concerning her past experience in sickness, and the fact was revealed that one year before, at about the same time in August, she was attacked with hay fever, which came on with suffusion of eyes, sneezing, and nasal discharge, and ran its course of a few weeks in the usual way. I left the woman lying composedly in bed, to be summoned again in five hours, in consequence of renewal of symptoms, though not to the same degree as before. A hypodermic injection of morphine, to which no objection was made, promptly abated her distress. For perhaps a week following this attack, the catarrhal manifestations of hay fever were exhibited, which yielded to liberal portions of quinine, or proved abortive because of the violence of the invasion of the disease, or from some other cause in connection with this peculiar and intractable malady, which it is hoped the researches of patient investigators will enable us eventually to understand.

October 1, 1878.

On the Use of Wine in the Capillary Bronchitis of Children.—M. Bonamy, of Nantes, speaks highly of the use of wine in the treatment of capillary bronchitis in very young children. He does not think very large doses advisable; he gives from five to six ounces daily to children between one and two years of age, varying the dose also according to the strength of the patient. As adjuvants he employs cutaneous revulsives and ipecac. He reports three cases in which this treatment was crowned with complete success. One was a case of severe broncho-pneumonia; from five to six ounces of Malaga wine were given daily, and under its influence the respiration fell rapidly from 50 to 26 in a minute. In the other two cases he had to deal with broncho-pneumonia complicating pertussis; one of the patients was in a state of collapse when the treatment was begun. He used the following formula in these cases: Malaga wine, ℥ iij.; peppermint water, ℥ ijss.; syrup of orange-peel, ℥ v. M. A dessertspoonful every hour.—*Jour. de Méd. et de Chir.*

Reports of Hospitals.

COOK COUNTY HOSPITAL, CHICAGO.

(Reported for THE MEDICAL RECORD.)

CASE OF CYSTITIS AND VAGINISMUS—RAPID DILATATION OF URETHRA—PERITONITIS AND DEATH.

LIZZIE D., domestic, æt. twenty-three, single, of Irish parentage, was admitted to the surgical department of the hospital in the early part of February, 1878. She said her parents and some brothers and sisters had died of consumption or other tubercular diseases. She had been, until the beginning of this sickness, generally healthy.

For nearly two years she had been troubled with too frequent and painful micturition. Pain, which she located in the vulva, occurred always immediately after the urine was voided, and sometimes in the intervals. She had neuralgic pains in the sides frequently and in the back, and sometimes vague wandering pains in other parts of the body.

She looked pale and delicate; her appetite was poor; her bowels were habitually constipated; her menstruation was regular, but scanty. An attempted examination of the pelvic organs discovered the most intense hyperæsthesia of the urethra and ostium vaginæ. There was vaginismus to a degree that made a digital examination of the uterus impossible.

By passing the finger into the rectum the uterus was found to be in a state of slight procidentia.

The urine contained considerable pus and vesical epithelium, and a few blood-corpuscles.

She was treated for a month with daily injections into the bladder of weak solutions of chlorate of potassium, boracic acid, etc., without benefit. Each operation was attended with great apparent suffering, evidently mostly or quite all from the introduction of the catheter through which the injection was made.

She was transferred, March 9th, to the gynæcological department, in care of Dr. Norman Bridge. She was ordered 7 grs. bromide and 15 grs. acetate of potassium four times daily, and warm fomentations to the vulva.

The next day she had a slight chill that was followed by fever. In the afternoon the pulse was 120, temperature 102½° F. She was ordered 5 grs. quinine every four hours, as the fever was supposed to be malarial. By the 13th the fever had disappeared, and the patient felt more comfortable.

Dr. Byford had examined the case on the 11th and advised that, on the disappearance of the fever, rapid dilatation of the urethra be performed. Accordingly, in the afternoon of the 13th the patient was etherized, and the urethra dilated to three-quarters of an inch diameter. Three slight preliminary incisions were made in the border of the meatus to avoid rupture of the mucous membrane—according to the plan of Simon—and the instrument used was a conical bougie of large size. The patient was returned to bed, and ordered fomentations to the vulva and morphia as needed. In the evening there was a slight fever, but no suffering of consequence. The urine flowed from the bladder without control of the patient.

The next day there was absence of fever till evening, when two sharp darting pains were perceived in the abdomen, and the temperature rose to 104¼° F. by 8 P.M. There was very slight tenderness to pressure over the abdomen. The bowels moved spontaneously in the course of the evening. With liberal dosing with morphia the patient slept well, and next morning the fever was gone. She continued without fever and to improve until the afternoon of the 17th — four days after the dilatation—during which time she was taking citrate of iron and quinine, and eating fairly. She was then discovered to have a temperature of 103° F., but had little or no pain. Next day the temperature was slightly above 101° F. all day. She had slept well, and had slight hypogastric tenderness. Next day (18th) there was more fever. On the morning of the 19th the thermometer showed 99¾° F. But at 7½ P.M. she had a severe chill that lasted half an hour. This was followed by vomiting and high fever (P. 147, T. 105¾° F.), which continued all night. Severe pain appeared in the hypogastrium, and there was some tympanites. Poultices were applied and morphia administered. At 9 A.M. of the 20th, P. 128, T. 105° F.; 2½ P.M., T. 100¼° F.; ordered blister to hypogastrium 4×6 inches. At 8½ P.M., the temperature had fallen to 97¼° F.; the next morning at 9 it was 96¾° F., and at 12 it was only 97⅜° F. The surface and extremities were cool, and the mental condition was one of slight stupor. Artificial heat was applied, whiskey was given internally. The blistering material had caused no vesication. Reaction was good on the following day, when the temperature was 103° F. From this time she continued in an irritative fever, the temperature being most of the time above 100° F., until she died of exhaustion, the 19th of April, over a month after the dilatation of the urethra. Her tongue was red and fissured, and very sore. There was no tympanites and no tenderness over the abdomen more than over any other part of the body; she complained on being touched anywhere.

On the morning of the 23d, jaundice appeared. This was very marked for two or three days, when it gradually passed off. During its continuance the hebetude was greater, and sordes appeared on the teeth. From this time appearances of bed-sores presented themselves. In ten days large sloughs had formed over the lower part of the back and sacrum.

The patient was nourished with beef-tea and milk-punch, and was given morphia to the extent of quieting pain.

Unfortunately no post-mortem examination was allowed.

ABSCESS OF THE GROIN, AFTER CONFINEMENT, SIMULATING PHLEGMASIA DOLENS.

Molly C., colored, servant, twenty-nine years old, was admitted to the hospital May 13th, ten weeks after her confinement. Her mother had died of consumption. She herself had had cough for several years, expectorating frothy mucus. Three months previous to her confinement her feet and legs had begun to swell. This symptom had disappeared with the use of lemonade and pediluvia. A short time after this she began to have pain in the left groin, just below Poupart's ligament. From that time till the date of admission she had not been free from this symptom. Three weeks after confinement there appeared at the seat of pain a swelling about the size of a hen's egg. This swelling decreased in size somewhat for two weeks, when she noticed the foot and leg of that side were swelling. The whole limb became swollen, and she had sensations of fever frequently. Pain was experienced along the anterior and inner aspect of the thigh and in the popliteal space. Three days previous to admission she noticed a slight swelling just above the crest of the left ilium, which had become painful.

On admission she had pain in the left groin, and an annoying cough. There were abundant râles all over the chest. The left leg and thigh were greatly swollen; there was tenderness along the inner aspect of the thigh; there was a point of pronounced induration just below Poupart's ligament; also an enlargement just above the ligament, which gave a faint sense of fluctuation. There was slight œdema in the right lower limb. The temperature was 103¾° F. The urine was brown, and contained about five per cent. of its bulk of albumen. Two days later the fever was less. The tumor in the groin was more prominent; fluctuation was positive, and the aspirator needle was inserted, and ten ounces of thick pus evacuated. The patient grew weaker and worse. There was more fever, cough, and expectoration; the abscess was refilling; the swelling in the limb was worse. At the end of four days, while the surgeon was on the point of opening the abscess, it burst spontaneously. A very large quantity of pus was evacuated. From this moment convalescence was established. The swelling in the limb disappeared in a few days, as well as all other symptoms of disease. After a day or two the abscess discharged only serous pus; in a week it was healed. She was discharged well, five weeks after her admission. The secretion of milk, in this case, had ceased soon after confinement. While the œdema in the left limb was greatest, the patient called attention to an enlargement of the right labium majus, which was found to be quite excessive, resembling in appearance an œdematous swelling, but being harder, and not entirely disappearing on pressure. This disappeared with the general recovery. Curiously, there was no enlargement of the left labium.

Progress of Medical Science.

BLEPHAROSPASM WHICH RECOVERED UNDER TREATMENT.—Dr. Thomas Buzzard, of London, has published the record of a case which he has successfully treated. The patient, a married man of 58, who had previously enjoyed good health, complained of spasm in the left eyelids. At irregular intervals the orbicularis palpebrarum was spasmodically contracted, the eye being closed firmly for a few seconds. There was also a frequent winking of the eye between the more severe spasms. In examining for "pressure points" or spots that would stop the spasm, no response was found over the infra-orbital, supra-orbital, or inferior maxillary nerves, but when the finger was pressed upon the tragus and on the skin for about an inch in front of it, the spasm ceased to take place as long as the pressure was continued, but recurred with more than usual violence when the finger was lifted. Within the ear there was a peculiar sensation, which he found it hard to describe. Some wax was removed by syringing, but, though the hearing was improved, there was no diminution in the spasm. The constant current from a Stoehrer's battery was then applied with six cells, one sponge being placed just outside the outer canthus, and the other in front of the tragus. The application lasted ten minutes, and while it lasted the spasm was scarcely perceptible. Four days later the same treatment was repeated, and after three days more the twitchings had ceased, and there was only a tremor in the lids. Not long after, the patient went into the country, complaining only of a little "life-blood" in the lid. This case is regarded by the writer as having had its origin in the accumulation of wax in the ear, just as in the case mentioned by Von Graefe an ulcer upon the left glosso-palatine arch caused bilateral spasm, which ceased when the ulcer was healed. Probably the disorder would have subsided, without further interference, in due time after removal of the wax; but the passage of the continuous current stopped it immediately.—*The Practitioner*, June, 1878.

A SUMMARY OF VIEWS AS TO URETHRAL STRICTURE AND ITS TREATMENT.—Dr. Thomas R. Brown, of Baltimore, has addressed circular letters to various surgeons who have had large experience in genito-urinary diseases, aiming to elicit from them their views upon some of the vexed topics of stricture and its treatment. Among the correspondents were Drs. Gross, Van Buren, Bumstead, Bigelow, and Otis, of this country, and Barwell, Lister, Bryant, Berkeley Hill, Teevan, Sir Henry Thompson, and Sir James Paget, of England. In response to the question, "What is your opinion as to there being such a condition as spasmodic urethral stricture?"—the affirmative and negative answers were about equal in number, though nearly all agreed that, when a slight organic narrowing of the canal exists, spasms will take place, especially if the urine be irritating. In answer to the question, "What means of relief should be employed when renal disease is detected?"—the majority preferred gradual, continuous dilatation or divulsion, rather condemning every operative procedure, except under the clearest necessity. In answer to the question, "In what proportion of your cases, treated by any of the methods in common use, would you be willing to state that such a complete relief has been afforded as to secure the patient an entire immunity from the after-introduction of the sound?"—nearly all thought that the sound could not be dispensed with, for an indefinite period, at all. To the question, How far individual observations had confirmed the view of Dr. Otis as to the relation between the size of the urethra and the flaccid penis?—the majority had no answer to make, because they had no experience in the matter. Dr. B. attaches less importance to the measurements of the penis and more to the indications of the urethrometer. Drs. Pease, of Syracuse, and Mastin, of Alabama, corroborate the statements of Dr. Otis as to the relative measurements, while others are disagreed. The sentiment of almost all the respondents was that close strictures of the penile urethra should be treated by internal section, and all the rest by gradual dilatation or divulsion.—*Trans. of the Med. and Chir. Faculty of the State of Maryland*, 1878.

NEUTRAL ACETATE OF LEAD IN GRANULAR CONJUNCTIVITIS.—Dr. Pierd'houy employs finely powdered, neutral acetate of lead in the following manner, in the treatment of conjunctival granulations: a blunt-pointed hair pencil is slightly moistened, impregnated with a small quantity of the powder, and then brushed lightly over the exposed surface, so as to touch all the granulations. The mucosa must first be carefully cleansed. He claims that incrustations on the cornea are not to be feared, even when ulcers exist. The granulations, after the application, appear flattened and shrivelled, and are covered with a delicate, whitish pellicle. The reaction does not last longer than twenty-four hours, but it is sufficient to repeat the operation every four or five days. The advantages claimed for this mode of treatment over that by nitrate of silver or bluestone are that it is less painful, that cicatrices are less likely to form, and that the time required to produce atrophy of the granulations is only about half as long.—*Le Lyon Médical.*

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THE TREATMENT OF CRIME AND REFORM OF CRIMINALS.

I.

A most suggestive document has come to us in the form of the official "Report of the Inspectors of the State Prison of the State of Michigan for the Year 1877," reflecting the greatest credit upon its authors, not simply for its valuable and detailed tables, etc., but for the expression of the highest and broadest humanitarian views upon the subject of discipline and reform of criminals. Nor does the philanthropy end with the mere expression of reformatory views, but in their practical application by those in authority. The inspectors say:

"It is the governing rule of the prison, while endeavoring to maintain strict discipline, not only to recognize the possibility of reform, but so to administer the trust as to secure such a result. The fact is recognized that few men are *wholly* bad. They [convicts] have moral natures that, however degraded, may be influenced and lifted up; justice and humanity they can appreciate as well as others. In case of a violation of the penal laws of the State, the violator has shown that he possesses a disposition that has led to such violation, and that similar motives and similar inducements will probably lead him, if unrestrained, to the commission of further crime. The public have the right to demand protection from any further depredations on his part. The criminal is tried, convicted, and sentenced to be confined in the State Prison. This is not done in a spirit of revenge. It is also assumed that it may be probable during the time of his imprisonment, with the opportunity for calm reflection, the separation from evil associations, and other moral influences that are brought to bear upon him, that he will thereafter be, and remain, a law-abiding citizen; else, if there were no hope of reform, and if it were *certain* that the convict, at the expiration of his term of imprisonment, would at once enter upon a future career of crime, the public would not only have the right, but it would be its duty, to demand that he be imprisoned during life. The average convict is a man of perhaps more than ordinary acuteness of intellect, and he knows what is right and wrong. If actually guilty, his judgment tells him that imprisonment for the commission of crime is just. And this knowledge leads him to respect the thorough discipline of the prison. Yet the convict is sensitive to injustice, or what he conceives to be so, whether the injustice is connected with his original sentence, or with his experience in the prison. And there is very little hope of reform in any case where such a sense of injustice exists, although there may be no real cause for its existence."

And who can justly gainsay the truth of these propositions?

The subject of crime, its detection, and punishment, is a vast field for study, and a still vaster field for reform. We are all familiar with the parody on justice whereby a suspected person is arrested, preliminarily examined (!), and "committed without bail" to the police or city prison, consigned to a felon's cell, to the unwholesome atmosphere and fare thereof, simply upon suspicion. He must submit to a felon's punishment in advance of proof of guilt! By what principle of philosophy or reason have the law-makers presumed, from time immemorial, to deprive persons of their home or other comforts, simply because circumstances may seem to incriminate them. We are taught that "the law presumes every man innocent till he be proven guilty," and yet the acts of our teachers most outrageously bely their words? This stricture is to be applied not to the treatment of well-known transgressors against the law, not to the petty offenders, but to those suspected of the capital offences. Such a case recently occurred in Kings County; the man, quite aged, taken from his comfortable home and consigned to a felon's cell, held there some little time, and then discharged "for want of evidence"! What redress had he for the ignominy, the suffering for want of home-comforts, the mental agony? Absolutely none; the majesty (!) of the law had been vindicated! At what possible cost? The liberated prisoner's health or mental wreck, the ruin of his business, or death, starvation, sickness, or insanity in his family. Surely justice demands no such penalties for simple suspicion. It seems incomprehensible to the reflecting mind that such practice can be tolerated in Christian and enlightened countries—for it is, deplorable admission, in existence in all the so-called enlightened countries! This fact must be due to tradition, conservatism, and public indifference. We have so many followers of Howard, ever trying to ameliorate and reform the condition of criminals, but the state of the law, in its relation to its first step in dealing with the punishment of crime, is left without the slightest question. What remedy is there? is asked. We shall see.

Then comes that injustice to which the criminal is so thoroughly alive, inequality of sentences.

"Eight convicts sentenced for an assault with intent to murder, during the last year, were sentenced as follows: One for forty-five years, one for twenty-five years, one for fifteen years, one for nine years, one

for six years, one for five years, one for two years, and one for one year. We might further illustrate this inequality of sentences by enumerating cases in all departments of crime. As our system of jurisprudence is at present constituted, it is not easy to find a remedy for this evil, for that it is an evil we have no doubt. A crime is committed in a neighborhood that arouses great public indignation and great excitement among the people. If, in this condition of excitement, the trial come on, the plough is left in the field, the tools of the mechanic are laid upon the bench, the professional man neglects his briefs or his patients, the ladies, for the time, omit their household duties, and all, by their presence in the court-room, testify their indignation against the criminal. [This unconsciously influences so that] the jury are more likely to convict, and the court feels that the crime deserves a severer penalty. It is well understood that if the defendant can get his case put over, the battle is half won, [and if deferred till the excitement passes away] a conviction is less certain, and if a conviction be obtained the penalty is likely to be less severe."

This excellent report refers to other circumstances determining inequality of sentences resulting from the discretion which is given to judges.

We need only to recall the case of a notorious abortionist, fully convicted of his horrible crime, and his two years' imprisonment, and compare it with the case of the poor half-starved man who stole a loaf of bread, and Recorder Hackett's sentence of two years, for examples of the law's justice and equity in New York State. Again, let us examine how the law treats the drunkard. By permitting the manufacture and sale of vilely adulterated liquors, poisonous mixtures, and treating the victim of alcoholic disease as a criminal!! It is a well-proven fact that the drinker is a diseased person; that the disease is either hereditary or acquired, like, in this respect, other diseases in its origin; that in its course it tends to destroy the functions of the nervous system especially, and thus undermine the whole system, above all, the mind. The poor unfortunate drunkard is arrested for the boisterousness and pugnaciousness produced by the diseased state of his cerebral circulation due to alcohol, and, if he be sufficiently fortunate to escape a clubbing, is thrown into a cell to await either soberness, fine and discharge, or other punishment, or death from cerebral congestion or hemorrhage, instead of being taken to the hospital and treated as a sick person. By the late issue of the London *Lancet* (July 22d), we notice the subject of drunkenness is being seriously considered in England in relation to its prevention and treatment by the law. To us the answer seems very simple: education of the rising generations and legal regulation of the purity of the liquors manufactured for the first; while care of the inebriate as a diseased person will surely meet the second indication in a humane and philosophical manner. Prohibitory laws and severe penalties can only work harm at every point.

"When a criminal is tried and convicted, and sentenced for the commission of a crime, the public can exact no further accountability from him on account of the crime.

"But the public law, having spent its power in convicting and sentencing him, he, at once, on entering the prison, becomes subject to the laws for the government and control of the prison itself. These laws must be strictly obeyed, and the authorities of the prison must not only have the power, but must exercise it, to enforce obedience. With any other than a rigid system of perfect obedience, anarchy would exist. Every infraction of the rules to a greater or less extent affects the whole prison. Therefore, as strict obedience is absolutely essential to the well-being and safety of the prison, the only question is as to the best method of enforcing that obedience. Our experience convinces us, against our preconceived idea, that the discipline of the prison cannot be preserved without the infliction of corporal punishment in certain cases, and what is equally important, unless the convicts feel that there is absolute certainty that it will be inflicted in such cases. But no barbarous punishments are allowed. For slight infractions of the rules it is sufficient in most cases to take from the delinquent a portion of the good time gained. Other cases are punished by confinement in the cell. This frequently produces the desired effect. In other cases it is no punishment at all. In fact, it is preferred to hard work. If in addition to simple confinement the convict is placed upon a short allowance of food, the desired effect is more likely to be produced after a time. But it will not be wondered at that among the eight to nine hundred convicts there are many who are incorrigibly evil. They care for no law. They are shrewd and crafty or defiant. Their influence is only evil. The fear of physical punishment alone restrains them. A few blows with a leather strap (the only instrument used in the prison for the purpose of punishment) always brings them to submission. It cannot by any possibility work any permanent injury; it leaves no marks upon the body, and yet the sensations it produces are sufficiently acute to produce the desired result. We are glad to say that this form of punishment is not of frequent occurrence. As an evidence of its good effects when administered, it is invariably true that, whenever a punishment of this kind is inflicted, the reports for bad conduct among the convicts at once diminish in number. In this way its influence for good is felt through the whole prison, and as the first effect of such punishment seems to wear off, the reports gradually increase until there is another infliction of the same punishment. If the laws especially provided that they could be punished for offences committed in prison by further imprisonment, it would do more to keep them in subordination than all things else."

While we agree with the inspectors that corporal punishment by the strap is not barbarous or injurious if rightly used, we cannot feel it safe to trust the judgment of human nature as usually found in prisons, and are convinced that re-trial and re-imprisonment is the only manner of keeping the vicious in subjection and under discipline. Additional imprisonment for each prison offence, lengthening the time indefinitely, would not be courted by even the worst criminal. The principle of, first, protecting the public from further depredations on the part of the offender; second, reforming the evil-doer, should not be transgressed—should always be the basis for all laws.

"The State has a duty to those men something beyond the act of temporarily confining them in prison. It should, as far as may be, fit them for and furnish them inducements to become honest citizens. And what is better calculated to do this than to compel them to form systematic habits of labor, and at the same time allow them to learn something of the work, whether mechanical or otherwise, at which they are placed? And it would seem that if the constitutional requirement that no mechanical trade shall be taught in the State Prison were exactly reversed, it might result, in many cases, in great good to individuals, and no injury whatever to the community at large."

But, it may be asked, shall presidents of banks, insurance companies, and other corporations—men who have lived by mental, not physical labor—be compelled to learn a trade, and do menial (as they would call it) labor? Why not? Would they be any the worse for learning how to earn an honest living, and, by a combination of practical experience and deductions therefrom, in a measure realize the enormity of their crime in having robbed hard-earned savings?

Should such an educated, shrewd villain, whose superior intelligence makes his crime all the more enormous, be punished less severely—for to him, like the hereditary drone, work is punishment—than the man whose mental capacity and education is inferior, whose surroundings in life are of a debasing tendency? Would not the learning of a trade cause him to respect honesty, and, by deposing that false pride which led him to his crime, replace it by a regard for labor which gains an honest livelihood and peace of conscience? The system whereof labor forms a part cannot be too highly valued, and we heartily agree that

"It is therefore thought wise to provide systematic labor for convicts, and hard labor is a part of the sentence of those convicted of State prison offences. The regular labor of the convict for a series of years tends at least to the formation of habits that may materially aid him at the expiration of his term, if he is really desirous of leading a new life."

THE YELLOW FEVER RELIEF FUND.

We are informed that the relief fund, contributed by the Medical Society of the County of New York and County of Kings, for the families of medical men which have suffered from the yellow fever, now amounts to three thousand dollars.

The Presidents of these medical organizations, notably Dr. Peters, have taken an active interest in the measure from the beginning, and have succeeded in systematizing a plan of relief which cannot fail to give satisfaction to the contributors of the fund, and speedy and discriminative relief to the sufferers. Dr. Mitchell, the Medical Director of the Howard Association at Memphis, has furnished some valuable information concerning the real needs of particular families within his jurisdiction, and in a private note to Dr. Peters has assured that gentleman that he will do everything in his power to aid the charitable movement. The same may be said concerning information from other quarters. So far as is known at present, aside from those already mentioned, the Rhode Island Medical Society, the Ulster County Medical Society, and the District Medical Society of New Jersey, are the only ones which have organized committees of relief. We trust that there is no necessity for urging other Medical Societies to follow this example and do all in their power to swell a fund the demands upon which during the coming winter will be very urgent. As we have previously advised, the bureau of distribution from this and adjoining States has been located in New York, the Medical Society of the County receiving the contributions from other similar organizations. We would suggest that it might be convenient for societies in the West and South to centralize their efforts in the same direction, as New York has possibly the best facilities for collecting information, and for receiving and disbursing charities of all descriptions. The officers of the County Society here would gladly do all in their power to such ends.

STATE EXAMINATIONS FOR DEGREE OF DOCTOR OF MEDICINE.

We begin to believe that the profession is gradually being educated to the necessity of a State examination for the degree of doctor of medicine. Of course there is a great deal of opposition to such a proposition on the part of the colleges, but the sentiment is gradually gaining ground that the proper way to advance the interests of scientific medicine and elevate the standard of medical education is to make the colleges educational institutions only. We have gone over the ground so often, and so frequently urged the practicability of the measure, that it is hardly necessary to allude to the fact even in passing, but we take occasion to do so for the purpose of introducing the following extract from an admirable editorial on the subject which appears in a recent number of the *Homœopathic Times*.

"What we need is a non-sectarian Board of Examiners, in whom the profession and the community have confidence. Take away from our colleges the power of granting licenses to practice. Let them be simply educational institutions, their diplomas being only certificates of scholarship, and giving no power to practice medicine. It is a well-known fact that some of the colleges in our school do not represent the ability and standing of our profession; that they are under the control of cliques, whose aspiration for the public good is bounded by their own pockets, closing the doors of their institutions to all talent, unless it will slavishly repeat their shibboleth and form a harmonious part of their ring. With an unsectarian board of medical examiners, medical colleges, deprived of their power of granting licenses to practice, would stand for just what they are worth as educators. They would be obliged to compete with teachers all over the country, who would draw to their class-

rooms, with great advantage to the student, scores of those to whom now the only opening to their profession seems to lead through the class-rooms of medical colleges."

This is certainly preaching to the point, and receives our warmest commendation. There is a liberality about the proposition for an "unsectarian" board which means a great deal and looks in the direction of true progress.

MEDICAL ADVERTISING IN CHICAGO.

The profession in Chicago are much exercised concerning the threatened discipline of certain prominent medical advertisers, whose certificate of a certain oculist is published in the local papers. There is certainly something ridiculous in the defence which the parties set up, and the show of injured innocence which they maintain as to any wrong which they have committed. We can scarcely imagine, however, a more flagrant offence against the spirit of the code than the signatures of these gentlemen, with their full hospital and college titles. The wrong-doing turns upon the advertisement of these professors as medical practitioners, and the unnecessary parade of their medical qualifications as distinguished certificate writers. We are not informed that the objectionable testimonials have been withdrawn, but, if not, the Medical Society of Chicago owe it to their professional brethren to see that such is done, and establish a precedent similar to that which now governs certificate writing for the daily papers in New York.

Reviews and Notices of Books.

A Practical Treatise on the Diseases of the Ear. By D. B. St. John Roosa, M.D. Fourth edition. William Wood & Co. 1878. 8vo. pp. 569.

The appearance of a fourth edition of any book is hardly the occasion upon which to speak of its general merits; these will already have been discussed, and the review of such an edition is usually to inquire whether the work has kept pace with the advance of its subject; whether improvements have been introduced in its style or precept; and whether in the revision old errors have been allowed to remain. If any one has a right to speak authoritatively upon otological matters, it is Dr. Roosa, for it is he who, more than any one else, has made known to the American medical profession the general principles of treatment of aural diseases; and it is safe to say that no book upon any special subject has been more widely distributed throughout the country than has his admirable treatise. If this work be carefully studied, it will be seen that two main ideas run through the whole of what has been written: first, that a skilful treatment of ear-troubles involves a consummate knowledge of general medicine; second, that the measure of success is determined by the thoroughness which the practitioner brings to the examination of his cases, before applying his simple armamentarium.

It is carefully inculcated that nothing is to be done without a knowledge of what is required, and that practice "in the dark" (tentative practice) is less justifiable in this branch of medicine than in any other.

The book is now substantially as it was in its first edition, except that the chapter on Diseases of the Internal Ear has been wholly rewritten, which, we think, constitutes an improvement.

We regret, however, not to see recorded the latest views with respect to the relations which the planes of direction of the semicircular canals have to their function of enabling us to appreciate movements in the various directions; and M. Cyon's idea of the relation of the otoliths in the ampullæ, and the fluid in the semicircular canals, to the periorbital muscles and visual vertigo comes from sufficiently high authority to have secured at least a notice.

That most intractable and distressing accompaniment of so many ear-troubles, "tinnitus," has little or no new light thrown upon it, although it is alluded to under at least eight different heads. The idea is still maintained that it is the result of an irritation of the acoustic nerve by the various morbid processes which affect the middle ear and labyrinth. It has lately been advanced by French authorities that tinnitus is due to trophic affections of the fifth nerve producing subjective sounds, precisely analogous to those visual sensations in which the peripheric organ of sight takes no part. We may also be sure that the seventh nerve takes no part in tinnitus, at least in some cases, inasmuch as the symptom often accompanies absolute nervous deafness.

We note that no account is given of the method recommended twelve years ago by Grüber, and lately revived by Weber-Liel, of washing out the tympana through the nostrils and Eustachian tubes, when the membranes are absent. Weber-Liel, for this, as for cleansing the naso-pharyngeal space, prefers weak solutions of bicarbonate of soda, instead of chloride of sodium, as recommended by Roosa and others, believing that the danger of exciting inflammation of the middle ear is thereby much lessened.

We must consider the directions for inflating the middle ear as incomplete, in not mentioning Dr. Tansley's method of causing the patient to blow forcibly through a small aperture between the lips, when the Politzer bag is used; and, above all, we should have been pleased to see described Weber's method of making the patient pronounce *hack, heck, hick, hock*, for the purpose of inflation, because in our experience this shuts off the pharyngeal from the posterior nasal space more effectually, and in a pleasanter way than the old swallowing process. It must have been an oversight, in Chapter III., not to describe the German "Trichter," or nasal endoscope, introduced into this country by Dr. Prout, of Brooklyn; and we think that iodoform, in substance or ethereal solution, has proven sufficiently useful in the treatment of aural discharges to have merited some mention.

A small number of minor errors appear here and there: for example, all of the heads and subheads of the chapters are given in English, except in a solitary instance, on page 254, where we find "*Otitis Media Catarrhalis*" without its English equivalent. This has stood through the four editions, as has also the prescription on page 305, where the iodine is directed to be dissolved in a "half per cent. solution of *iodine*," when iodide of potassium is intended. The table on page 349 still remains incorrect in its percentages, although slightly altered from previous editions; and we see on page 378, for the fourth time, the *Eiterbecher* of the Germans spelled "*iter-becher*."

We notice that Dr. Roosa adopts Hyrtl's etymology

of the word cerumen—*cera aurium*—but it would be difficult to trace its transformation from such an origin; instead of that, we would suggest the Greek κηρὸς and ὑμὴν—a pellicle of wax.

The illustrations generally scarcely deserve to accompany a work of such unusually high merit; to the publishers, particularly, we would say that the caricatures on pages 95 and 96 are inexcusable. To the author we suggest that the novice will hardly learn from figure 13 in which direction the tympanic membrane is to be sought; a slight inclination of the patient's head to the right would remedy the defect.

It will be observed that of all the points which we have noticed, not one constitutes a defect sufficient to impair in any degree the value of the treatise. This remains the very best which has been offered to the profession, whether in America or England; and the debt of gratitude to the accomplished author will be cheerfully acknowledged for the part he has played in bringing aural surgery and medicine to their present high development.

ANNUAL ADDRESS, delivered before the Society of the Alumni of the Medical Department of the University of Pennsylvania, March 14, 1878, by W. A. B. Norcom, M.D., of North Carolina. Pamphlet, pp. 43. Collins, Printer.

THE aim of this scholarly address is to show that the chief obstacle to a proper appreciation by the public of the high character of our profession lies in defective medical education. This bane is presented in a striking light, and we cannot but hope that the author, who is a close reader and an acute thinker, will, by his earnest efforts, aid in hastening forward the day when medical colleges shall lose the character of commercial enterprises which they now possess, and assume their true function of opposing obstacles to the entrance of incompetence into our ranks. It is obvious that a recognition of the evil is being forcibly and widely impressed upon the minds of thinking men, and the effect of their utterances is manifest in the claim of the various colleges that their requirements for graduation have been raised. So long as colleges remain under private control, no material progress can be made; but when removed from the necessity of competition, as in the case of Harvard, University of Pennsylvania, Johns Hopkins University, and the University of Virginia, there will be no obstacle to their enforcing such requirements and such a curriculum as shall ensure the licensing of only competent men. Dr. Norcom, in this as in every department of medicine, shows that his views and information keep pace with the most advanced state of scientific progress.

ELEMENTARY QUANTITATIVE ANALYSIS. By ALEXANDER CLASSEN, Professor in the Royal Polytechnic School, Aix-la-Chapelle. Translated, with Additions, by EDGAR F. SMITH, A.M., Ph.D., Assistant in Analytical Chemistry in the Towne Scientific School, University of Pennsylvania. With thirty-six illustrations. Philadelphia: H. C. Lea. 1878. 12mo, pp. 328.

PROF. CLASSEN'S work, of which a translation is given us by Dr. Smith, is a small, practical, comprehensive and intelligible guide to practical elementary quantitive analysis, and is particularly well adapted to the wants of the beginner with laboratory work. The translator very truthfully says in his preface, that "the methods employed in the various determinations and separations are such as can be used at all times—care having been taken to exclude all that have but a very limited use, and such as have proved on trial to be devoid of practical merit."

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

THIRD ANNUAL MEETING.

Held in Philadelphia September 25, 26, and 27, 1878.

THURSDAY, SEPTEMBER 26TH—SECOND DAY—AFTERNOON SESSION.

THE Society was called to order at 3 P.M. by Dr. Goodell.

DERMOID TUMORS OF THE OVARIES.

A paper upon the above subject was read by DR. W. H. BYFORD, of Chicago. The histories of four cases were given. In all, the operation of ovariotomy was performed without difficulty, and recovery took place in each case. Dr. Byford defined a dermoid tumor to be a cyst formed anywhere in the body, the lining membrane of which was wholly or in part tegumentary in substance. As now understood, the presence of that structure alone justified the nomenclature. With reference to the theories regarding their origin, he remarked that they seemed to represent with some degree of exactness the physiology of the times in which they originated. In early times the theories were all vague and imaginary. The theories were classified under three divisions: 1. Those originating in the imagination alone; 2. Those which had for their basis the superstitions of the times in which they originated; and 3. The scientific theories. The theory which seemed by far the most satisfactory and scientific was the following: In the early period of embryonic development, by some accident or imperfection of formation, an indentation of the blastoderm somehow existed. That minute depression was enclosed by the approximation of its blastodermic margin, and became an isolated cavity, and the growth and development of the embryo were accomplished notwithstanding that accident to its envelope. The depression thus formed involved perhaps both layers of the blastodermic membrane, but the external layer became the lining membrane of the cavity, and was completely cut off from the rest of the blastodermic surface and invaginated with all its essential structures and processes of organization; all its products therefore must be retained in the cavity. The contents of that cavity corresponded in miniature with what the formation might have been if the displacement had not occurred. In the further development of the embryo the portion of the blastoderm covering that adventitious cavity developed its tissues and organs in the ordinary way, and thus enclosed it in the body by the structures usually found to cover it. The theory, it was believed, served to explain why these hairy tumors were found in the fœtus, child, virgin, matron, or male, and with equal plausibility why they might exist in any part of the body. At present it could not be asserted that these tumors were not as common in the male as in the female.

The paper was discussed by DR. NOEGGERATH, of of New York.

DR. W. L. RICHARDSON, of Boston, then read a paper entitled

A CONTRIBUTION TO THE STUDY OF THE TREATMENT OF THE ACUTE PARENCHYMATOUS NEPHRITIS OF PREGNANCY.

The object of the paper was to call attention to the necessity of examining the daily quantity of urine

passed, as well as the quality of that secretion; the latter showing the presence of a threatened danger, the former revealing the true extent of the danger. The writer concluded the paper by advising that from time to time the urine of a pregnant woman be examined with a view of early detecting the presence of an acute parenchymatous nephritis. When such a disease was shown to exist, a record of the daily quantity of urine secreted should be kept. If the quantity fell largely below the normal, we should endeavor by proper treatment to re-establish the impaired function of the kidneys, or, failing in that, to supplement their loss of action by the increased action of other excretory organs. If the quantity still diminished, the induction of premature labor at once was recommended.

The paper being before the Society for discussion—

Dr. T. G. Thomas, of New York, remarked that he had listened with interest to the paper because it expressed his own individual views upon the subject. He regarded it as a serious error when a physician thought it necessary to produce premature labor in every case of albuminuria. In the treatment of these cases he regarded it as important to keep up the excessive action of the skin, and for that purpose pilocarpin was suggested as a most reliable diaphoretic.

The discussion was continued by Drs. Atlee, of Lancaster; Barker, of New York; and Lyman, of Boston.

Drs. Barker and Altee made special reference to the lancet, and thought it could be used with benefit in the treatment of threatened puerperal convulsions.

The Society then adjourned to meet on the following day at 10 A.M.

Friday, September 27th—Third Day—Morning Session.

The Society was called to order at 10 A.M., Dr. Fordyce Barker, of New York, in the chair.

The following officers were announced as having been elected for the ensuing year:

For President—Dr. T. Gaillard Thomas, of New York.

For Vice-Presidents—Dr. D. H. Storer, of Boston, and Dr. H. P. C. Wilson, of Baltimore.

For Secretary—Dr. James R. Chadwick, of Boston.

For Treasurer—Dr. Paul F. Mundé, of New York.

For Council—Dr. A. H. Smith, of Philadelphia; Dr. G. J. Engelmann, of St. Louis; Dr. John Byrne, of Brooklyn, and Dr. T. A. Emmet, of New York.

For Honorary Fellows—Dr. J. S. Billings, U. S. A., Washington, D. C., and Dr. J. Matthews Duncan, of London.

For Resident Fellow—Dr. Nathan Bozeman, of New York.

It was decided to hold the next meeting in Baltimore, commencing on the third Wednesday of September, 1879.

Dr. S. C. Busey, of Washington, then read a paper entitled

ALTERNATING ANTERIOR AND POSTERIOR VERSION OF THE UTERUS.

Dr. Busey had selected the above title because it expressed the distinctive features of a case in which the organ, when unsupported by any mechanical means, was always found in the position either of complete anteversion or retroversion. He thought the condition was due to an elongated and cartilaginous cervix. He suggested three methods of treatment: 1. Amputation of the cervix; 2. Organic fixation of the cervix; and 3. Mechanical fixation of the cervix.

Dr. H. J. Garrigues, of Brooklyn, followed with a paper on

GASTRO-ELYTROTOMY.

He first gave a brief outline of the history of the operation as performed by Joerg, Ritgen, Baudelocque, and Skene, and as it was revived with an important modification by Dr. Thomas, of New York, in 1870. Dr. Garrigues proposed to make the first opening in the vagina with the galvano or other form of cautery. He urged the propriety of the operation, and thought it should always be adopted instead of craniotomy when the conjugate diameter was two and a half inches or less, and also instead of bad cases of embryotomy. In certain cases the operation would always be excluded. It could not be repeated upon the same side. It was impossible when the head was immovably wedged in the pelvis. It was contraindicated in cases of atresia or coarctation of the vagina, of obstruction of the vagina by a solid tumor, or when the obstruction was situated in the uterus.

Dr. Barker, of New York, regarded the subject as a very important one, because every practitioner might be called upon to decide whether gastro-elytrotomy was to be performed in preference to Cæsarean section or craniotomy. He therefore called upon Dr. Thomas, of New York, to open the discussion.

Dr. Thomas referred in detail to the steps by which he was first led to perform the operation, and related the history of his first case.

He had not experienced any difficulty from hemorrhage; neither had Dr. Skene, who had operated three times. He regarded the success of the operation as already sufficient to warrant a trial of it in cases in which Cæsarean section or craniotomy had been proposed. With reference to fistulæ in the bladder, they inevitably closed. Cellulitis was not very likely to occur if an opening was left so that antiseptic injections could be freely used. A good operation could not be kept down by mere argument, as had been shown in the case of ovariotomy.

Dr. Byford, of Chicago, thought that opening the peritoneum of the pregnant woman was one of the very greatest of dangers, because of the increased vascularity of the tissue at that time.

Previous to the present discussion he had regarded the danger from hemorrhage as very great, and also that there was great difficulty in getting into the pelvic cavity.

Dr. Campbell, of Augusta, thought that opening the peritoneal cavity at the present time was not so dangerous as was generally supposed.

Dr. Bozeman, of New York, directed attention to a point in the surgical anatomy of the parts invaded by the operation, and regarded the relative position of the ureter as exceedingly important. He thought it quite impossible to effect an entrance into the vagina without involving the ureter, and believed that in the cases in which bladder trouble appeared after the operation was performed, it was caused by accident to the ureter, and not to the bladder.

Dr. Garrigues replied that the point to which Dr. Bozeman had alluded had not escaped his attention, and he had reached the conclusion that the operation could be performed without injury to the ureter, because the opening was made below and parallel to the tube. If the first incision was made parallel to the brim of the pelvis, it would be parallel to the mouth of the uterus and also to the ureter.

THE PENDULUM OR OSCILLATORY MOVEMENT OF THE OBSTETRIC FORCEPS.

Dr. A. H. Smith, of Philadelphia, read a paper upon the above subject, and took the position that, for the safety of the mother and the child, the obstetric forceps should be kept in the median line, and should not receive any lateral or pendulum motion. Dr. Smith regarded the leverage power of the forceps as a most dangerous delusion, and that as an aid to the traction efforts of the forceps it had no foundation in fact.

The leverage motion was liable to injure the tissues of the mother and of the child.

Dr. Smith gave a mathematical demonstration of the fact that every sway of the handles of the forceps produced a change in the plane presenting coincidently with the plane of the pelvis, and that the farther the handles were removed from the median line the longer was the diameter presented for passage through the pelvis. He also believed that the leverage movement, so far from being an economical expenditure of force, was an absolute waste of power; that it could not advance the head, but simply expended itself in contusing the tissues of the pelvis. Leverage with traction had the same effect, only to a greater degree.

The arguments in favor of direct traction were:

1. That it imitated the operation of nature.

2. That it expended economically the entire forces in the direction of the motion, in harmony with a well-recognized principle in mechanics.

The following conclusions were reached by the author of the paper:

1. That the pendulum movements were in direct violation of the teachings of nature.

2. That they were absolutely useless as an aid to traction.

3. That any virtue they had was in stimulating uterine contractions, which themselves acted independently of them.

4. That so far from diminishing friction, they increased it.

5. That they tended to do injury to the pelvic tissues wherever they were practised, and so far from being especially useful in difficult cases of labor, the greater the difficulty of the case, the greater the danger to the tissues.

6. That, instead of being an economy, they were a waste of forces.

The discussion of Dr. Smith's paper was postponed until the afternoon session.

The Society adjourned to meet at 3 P.M.

Third Day—Afternoon Session.

The Society was called to order at 3 P.M. by Dr. Goodell.

The discussion of Dr. Smith's paper being the first business in order—

Dr. J. P. White, of Buffalo, remarked that the paper by Dr. Smith should lead us to consider whether we did not do injury by using the forceps too much as a lever. Traction was the chief reliance in the instrument, and compression was of some avail, although of less importance than had sometimes been supposed.

Dr. Barker, of New York, thought there was a fallacy in the idea advanced by Dr. Smith, that we should never carry one extreme of the biparietal or bitemporal diameter along the cavity of the pelvis any faster than the other.

Dr. Storer, of Boston, thought it very important to know exactly the amount of compression which was being applied to the child's head. His rule had been to make traction without lateral movement, but there were cases in which there might be slight deviation from the rule.

Dr. Penrose, of Philadelphia, had been guided by the teachings of Dr. Hodge in the use of the forceps, and regarded them as compressors, as tractors, and as levers.

Dr. Thomas, of New York, thought the forceps were *rotators* as well as tractors, compressors, and levers. The instrument, however, should be used always as a tractor, and as a lever only when it must be so employed. The leverage movement, he thought, was beneficial in cases in which there was an œdematous condition of the vagina. He thought the lateral movement should not be excluded altogether.

Dr. Goodell, of Philadelphia, thought that telescopically Dr. Smith's views were correct, but that microscopically they were not.

With men who were familiar with the use of the forceps, the lateral movement was a mechanical advantage, and could be resorted to with safety; but in the hands of a tyro it certainly increased the danger to the mother. He discussed at some length the mechanical principles involved in Dr. Smith's paper.

Dr. Smith, in closing the discussion, remarked, it was allowed that compression of the child's head was produced by the lateral movement of the handles of the forceps, hence its advantage; but if such was the case, why not make such compression by the blades of the forceps, and save the tissues of the mother from the danger attending the lateral movement?

He believed that compression without traction was preferable to leverage without traction. If compression was made just sufficient to diminish the friction, and the handles of the forceps were kept in the median line, the contractions of the uterus would crowd the head downward.

It seemed that all agreed there was danger in the lever power of the forceps, and yet all the gentlemen wished to have a little of that danger. If dangerous at all, why use it?

After the close of the discussion, Dr. H. F. Campbell, of Georgia, read a paper on

RECTAL ALIMENTATION IN THE NAUSEA AND INANITION OF PREGNANCY.

The following papers were read by title:

Three Cases of Ruptured Uterus, by Dr. T. Parvin, of Indianapolis.

Leucorrhœa Considered in Relation to its Constitutional Causes and its Constitutional Effects, by Dr. Fordyce Barker, of New York.

Treatment of Pelvic Indurations and Effusions, by Dr. E. Van de Warker, of Syracuse, N. Y.

A New Instrument for the Reduction of an Inverted Uterus, by Dr. J. Byrne, of Brooklyn.

On Some Points Connected with the Treatment of Sterility, by Dr. A. Reeves Jackson.

Improved Tents, by Dr. James P. White.

A Case of Extreme Anteversion at the End of Gestation; with Remarks on the Treatment. Also, The Early Delivery of the Placenta when Previa, with a Case of Spontaneous Detachment of that Organ without Hemorrhage, by Dr. I. E. Taylor, of New York.

A Study of Douglas' Pouch, by Dr. J. R. Chadwick, of Boston.

Dr. Goodell then delivered the closing address, and declared the Society adjourned to meet in Baltimore on the third Wednesday of September, 1879.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 29 to October 5, 1878.

HEIZMANN, C. L., Capt. and Asst. Surgeon. Assigned to duty at Fort Vancouver, W. T. S. O. 115, Dept. of the Columbia. Sept. 14, 1878.

GRAY, W. W., 1st Lieut. and Asst. Surgeon. When relieved by Asst. Surgeon Heizmann, to report for duty at Fort Colville, W. T. S. O. 115, C. S., Dept. of the Columbia.

CHERBONNIER, A. V., Capt. and Medical Storekeeper. Granted leave of absence for one month. S. O. 213, A. G. O., October 3, 1878.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.—Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 5, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Sept. 28, 1878.	0	17	28	0	1	18	0	0
Oct. 5, 1878.	0	30	52	0	1	31	0	0

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE. WASHINGTON. D. C., Oct. 5, 1878.

NATIONAL QUARANTINE REPORT.—Abstract of sanitary reports received during past week under the National Quarantine Act:

New Orleans.—During the past week there were 1,754 cases of yellow fever and 360 deaths. Total cases to yesterday afternoon, 10,218; total deaths, 3,060.

Southwest Pass, La.—5 deaths from yellow fever occurred during the past week.

Morgan City, La.—For the week ending yesterday evening there were 155 new cases of yellow fever and 18 deaths. Total cases, 300; deaths, 48.

Baton Rouge, La.—During the week ending 9 o'clock yesterday morning there were 524 new cases of yellow fever and 32 deaths. Total cases, 1,417; deaths, 78.

Plaquemine, La.—242 cases of yellow fever and 10 deaths occurred during the week ending Sept. 21st. Total cases to that date, 547; deaths, 63.

Pass Christian, Miss.—There were 26 cases of yellow fever and 3 deaths during last week. Total cases, 59; deaths, 6.

Mississippi City, Miss.—12 cases of yellow fever and 2 deaths occurred last week. Total cases to yesterday evening, 20; deaths, 3.

Canton, Miss.—Total cases of yellow fever to the 4th inst., 720; total deaths, 113. Dr. Semmes reports fever milder and material nearly exhausted.

Ocean Springs, Miss.—There were 18 cases of yellow fever and 4 deaths during the week ending yesterday. Total cases, 78; deaths, 22.

Pascagoula, Miss.—One death from yellow fever at quarantine last week.

Mobile, Ala.—For the week ending yesterday evening there were 13 cases of yellow fever and 6 deaths. Total cases, 30; deaths, 17. Dr. Cochran reports yellow fever at Bonsecours and Fish River.

Vicksburg, Miss.—There were 70 deaths from yellow fever during the week ending yesterday evening. Total deaths, 849.

Memphis, Tenn.—199 deaths from yellow fever occurred during the week ending the 3d inst. Total deaths to that date, 2,627.

Brownsville, Tenn.—During the past week there were 77 cases of yellow fever and 20 deaths. Total cases to yesterday evening, 274; deaths, 86.

Grand Junction, Tenn.—The first case of yellow fever (refugee) occurred August 12th. Total cases to yesterday evening, 120; deaths, 52.

Chattanooga, Tenn.—43 cases of yellow fever and 18 deaths for the week ending yesterday evening. Total cases, 84; deaths, 44.

Louisville, Ky.—During the week ending yesterday evening there were seven cases of yellow fever and 5 deaths. Of these, 5 cases and 3 deaths were among the inhabitants residing near the Louisville and Nashville depot. No alarm exists, as it is believed there that the fever will not spread beyond its present narrow limits. The small number of cases appear to warrant that belief. Total cases to date, 102, mostly refugees, as previously reported; total deaths, 41.

Nashville, Tenn.—6 deaths from yellow fever to yesterday evening, all refugees.

St. Louis, Mo.—2 deaths from yellow fever at quarantine since last report. None in the city. Total deaths at quarantine and city, 41.

Cairo, Ill.—3 cases of yellow fever and 1 death since Oct. 2d. Information covering the first part of last week not definite enough to state here.

Cincinnati, Ohio.—From Sept. 28th to Oct. 2d there were two cases of yellow fever, 1 a refugee, and 1 death.

Grenada, Miss.—18 cases of yellow fever under treatment. Number of deaths not definitely ascertained.

Water Valley, Miss.—For the week ending Sept. 28th there were 18 cases of yellow fever and 10 deaths. Total cases to that date, 39; deaths, 17.

Key West, Fla.—No cases of yellow fever or deaths from Sept. 21st to Oct. 4th.

Havana, Cuba.—36 deaths from yellow fever and 6 from small-pox for the week ending Sept 28th.

The British iron steamship, "Ben Vairlish," from New Orleans, Sept. 20th, bound for Rotterdam, put into the Norfolk quarantine, Oct. 1st, leaking badly, having been on the Florida reefs 36 hours. One death from yellow fever occurred *en route*, and there were 3 cases on arrival at quarantine, 2 of which were convalescent.

St. Thomas, West Indies.—Advices to Sept. 24th report 2 cases of yellow fever in that city, one resulting in death, Sept. 23d.

Advices from Gibraltar to Sept 10th bring favorable reports from *Morocco*, where cholera has prevailed in the cities of *Fez* and *Mequinez*. The Governor of Malta has ordered that vessels arriving from Morocco without passengers be quarantined twenty-one days. Vessels with passengers, among whom cholera or choleraic diarrhœa has occurred, are not allowed to enter the harbor.

Calcutta.—11 deaths from cholera, week ending Aug. 3d.

Bombay.—31 deaths from cholera, week ending Aug. 13th.

There are many places in Louisiana, Mississippi, and Tennessee where the yellow fever prevails, but they are not named in this bulletin, for the reason

that definite and reliable information of the number of cases and deaths could not be obtained.—JOHN M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

LIST OF PHYSICIANS WHO HAVE DIED OF YELLOW FEVER IN MEMPHIS.—Dr. R. W. Mitchell, Medical Director, Howard Corps, Memphis, Tennessee, has furnished the following list of physicians who have died in Memphis since the commencement of the present epidemic up to Oct. 1, 1878:—Armstrong, J. W., Memphis, Tennessee; Burcham, Robert, Columbus, Ohio; Bond, T. W., Brownsville, Tenn.; Bankson, T. S., Stevenson, Alabama; Chevis, L. A., Savannah, Georgia; Dawson, G. R., Memphis, Tennessee; Forbes, J. G., Round Rock, Texas; Gorrell, J. O. G., Fort Wayne, Indiana; Harlan, L. B., Hot Springs, Arkansas; Hodges, W. R., Memphis, Tenn.; Hicks, Jno. B., Murfreesboro, Tenn.; Meade, W. C., Memphis, Tenn.; McKim, J. W., St. Louis, Missouri; McGregor, Thos. H., Tipton County, Tenn.; Menees, T. W., Nashville, Tenn.; Nugent, P. C., St. Louis, Missouri; Pierce, Hiram M., Cincinnati, Ohio; Renner, J. G., Indianapolis, Indiana; Turck, P., Cincinnati, Ohio; Tate, R. H., Cincinnati, Ohio; Williams, R. B., Woodburn, Kentucky; Robbins, N. H., Memphis, Tenn.; Earley, E. T., Little Rock, Arkansas; White, J. M. S., Macon, Georgia. The above were all members of the Howard Volunteer Medical Corps. Dr. B. W. Arent, Dr. Paul Otey, Dr. John H. Erskine, Dr. J. P. Watson, Dr. Jno. D. Woodward, resident physicians of Memphis.

DR. HENRY G. DAVIS, formerly of this city, a gentleman who has done so much to improve the treatment of diseases of the joints, of fractures, dislocations, and deformities, has established a private hospital at Westboro, Mass., with accommodations for seventy-five patients. The institution is to be devoted to the treatment of chronic diseases, particularly consumption.

MEDICAL SOCIETY OF VIRGINIA.—The ninth annual session of this Society will commence in the city of Richmond, Va., at 7½ P.M., Tuesday, October 22, 1878.

Fellows and delegates, on entering the hall, are requested to register their names and post-office addresses in full in the ledger, which will be found upon the table of the Recording Secretary.

GOOD EFFECTS OF LIGATION OF THE THIGHS IN OBSTINATE EPISTAXIS.—M. Blondeau reports the case of a gouty subject, who had an attack of epistaxis, in which nearly two quarts of blood were lost, and which ceased only on the occurrence of syncope. Eight days later a second attack occurred. Injections of cold water containing perchloride of iron were first tried in vain, and a ligature was then applied tightly to the middle of the thigh. The hemorrhage ceased almost immediately, but reappeared on the following day shortly after the ligature had been removed. The ligature was again applied with equal success, but its removal was again followed by recurrence of the epistaxis. The treatment was, however, persevered in, and finally, after several days, the hemorrhage ceased completely.—*Gazette des Hôpitaux.*

TREATMENT OF GASTRIC ULCER.—Dr. C. Hertzka, of Pesth, has employed chloral hydrate with excellent results in the treatment of ulcer of the stomach. He was led to try the drug because, in addition to its hypnotic and anæsthetic powers, it has been demonstrated that it coagulates blood, favors the healing of ulcers generally, acts as a disinfectant, and, in particular, prevents the lactic acid fermentation, and finally, retards the functional action of the stomach and lessens the appetite. To a man, 48 years of age, who had been treated without success by the most various remedies, he administered every evening from forty-five to sixty grains of chloral largely diluted. This quantity was administered in three doses, at intervals of two hours, and at the same time Carlsbad water was freely given. On the third day the pains and vomiting ceased, and did not again recur. On the eighth day the patient was able to leave off the morphine injections, to which he had become accustomed. The chloral caused a severe burning sensation in the stomach, and produced a state of nervous depression, which ceased as soon as the treatment was discontinued (after fourteen days). Subsequently a feeling of burning and constriction in the œsophagus appeared at irregular intervals. Hertzka ascribed this feeling to the traction on the nerve-fibres by the contracting cicatrix in the stomach. For its relief subcutaneous injections of morphine had to be employed.

In a second case the chloral caused burning and vomiting. To prevent these unpleasant symptoms a morphine injection was administered two hours before the chloral, and large quantities of Carlsbad water were given after it. In future cases, Dr. Hertzka proposes to use smaller doses more frequently repeated. —*Centralblatt für med. Wissen.*

STRANGULATED HERNIA REDUCED BY ESMARCH'S BANDAGE.—M. Chapelle, of Paris, reports two cases of strangulated hernia that were reduced by means of Esmarch's bandage, after all other means of reduction had failed. The first case was one of scrotal hernia in a patient 72 years of age, and the other was a femoral hernia in a woman.—*L'Année Médicale.*

DEATH OF THE OLDEST MAN IN EUROPE.—The oldest man in Kurhessen, and undoubtedly, also, on the entire continent, died recently in the village of Kirchbracht. He was a peasant, by name Florinn Weissmuth, and is said to have been 148 years old. His descendants number two sons, who are themselves very aged, sixteen grandchildren, and forty-three grown up great-grandchildren.

THE ROLL OF HONOR.—The following are additional names of physicians who died while in attendance on yellow fever patients:

Memphis, Tenn.—Dr. T. W. Meares, volunteer from Nashville, Tenn.; Dr. J. B. Hicks, volunteer from Murfreesboro, Tenn.; Dr. J. S. Bankson, volunteer from Stevenson, Ala.; Dr. R. H. Tate, volunteer from Cincinnati, O.; Dr. W. J. Armstrong, of Memphis. Sept. 30th, Dr. Edward Tandy Easley, volunteer from Little Rock, Ark. Oct. 6th, Dr. William R. Lowry, of Memphis; Dr. R. F. Brown, Secretary of Board of Health. Oct. 7th, Dr. J. F. Sample, volunteer from Austin, Miss.

Vicksbury, Miss.—Oct. 6th, Dr. Newman. Oct. 7th, Dr. M. Blackburn, Dr. Birdsong.

Tangipahoa, La.—Sept. 18th, Dr. H. A. Swasey.

Grand Junction, Tenn.—Oct. 1st, Dr. Joseph H. Prewitt.

Greenville, Miss.—Dr. Stafford, Dr. V. F. P. Alexander.

Port Gibson, Miss.—Oct. 1st, Dr. J. G. Strobridge, Dr. W. D. Spratt.

Previously reported, 63. Total to date, 81.

CHLORATE OF POTASH IN THE TREATMENT OF KERATITIS.—M. Zuaglino, of Pavia, employs insufflations of powdered chlorate of potash with success, in the treatment of all the superficial and deep parenchymatous troubles, caused by the different forms of keratitis.—*Lyon Médical.*

Original Lectures.

LECTURES ON THE LOCALIZATION OF SPINAL AND CEREBRAL DISEASES.*

By E. C. SEGUIN, M.D.,

CLINICAL PROFESSOR OF DISEASES OF THE MIND AND NERVOUS SYSTEM IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

Lecture VII.

SUMMARY:—ANATOMY AND LESIONS OF THE CORTEX OF THE BRAIN.—THE CHIEF CORTICAL MOTOR CENTRES, AND BROCA'S SPEECH CENTRE.—LOCALIZED LESIONS OF THE CORTEX CEREBRI; DIFFUSED LESIONS OF THE SAME.

GENTLEMEN:—The cerebral cortex is an immense spread-out ganglion, whose functions are not yet fully or exactly known. Like all ganglionic masses, it is composed of ganglion-cells, nerve-fibres, blood-vessels, and neuroglia. Its ganglion-cells are generally pyramidal in shape, the apex of the pyramids being turned outward or peripherally. They vary very much in size and in precise shape, the largest occurring in convolutions of the median parts of the hemispheres.

This gray cortical layer becoming folded through the process of growth, ultimately presents irregular swellings and depressions of its surface. The swellings are called convolutions or gyri; the depressions, fissures or sulci. Some of the sulci are very deep, and receive special names. It should not be forgotten that the bottom of every sulcus is formed by the same ganglionic gray matter as the prominent parts or gyri.

These gyri are so grouped and separated by large sulci, that we are now enabled to make a successful topographical study of the apparently confused mass of convolutions; and in my brief description of the cortex cerebri I shall almost follow Ecker's classification of its parts. Thus in each hemisphere we have four lobes or groups of gyri, viz., the frontal, parietal, temporal, and occipital lobes. Separating these lobes are three large and constant fissures: the fissure of Sylvius, between the frontal and temporal lobes; the fissure of Rolando (or central f.), separating the frontal and parietal lobes; and the occipito-parietal fissure in the inner face of the hemisphere, limiting the occipital and parietal lobes.

Besides, we recognize four lobules, viz., lobulus centralis (island of Reil at the bottom of the fissure of Sylvius), lobulus paracentralis, lobulus cuneus, and lobulus quadratus, on the inner surface of the hemisphere. The paracentral lobule is made up almost wholly of the upper (inner) ends of the ascending frontal and ascending frontal convolutions as they dip into the great longitudinal fissure.

For a full account of these parts I would refer you to Ecker's monograph on the cerebral convolutions, to Ferrier's work on the functions of the brain, and to the latest edition of "Dalton's Physiology." A few of the convolutions in these lobes and lobules are of importance in the study of localization, and I must briefly describe them.

First, the third and ascending frontal convolutions. The former of these (f. 3, Fig. 9) constitutes the lower tier of gyri in the external aspect of the frontal lobes, and forms the antero-superior lip of the fissure of Sylvius. Its posterior part and its continuation into the island of Reil certainly have a very close connection with the function of written and spoken speech. The ascending frontal gyrus (A, Fig. 9) forms the posterior limit of the frontal lobe, and lies against the fissure of Rolando. Ecker calls it the anterior central convolution, but in common with Prof. Charcot and his pupils, I prefer the former designation. Immediately behind the fissure of Rolando, extending almost vertically, is the ascending parietal gyrus, or the posterior central convolution of Ecker. These two gyri, the ascending frontal and parietal, are intimately connected with movements of the face, arm, and leg; so-called centres for the face existing in the lower ascending frontal, centres for the upper extremities being found in its middle portions and in the ascending parietal gyrus; while the centres for the movements of the lower limbs are in the upper (inner) extremities of both these gyri, and in the next parietal convolution near the median fissure, viz., the superior parietal (p. 1, Fig. 9).

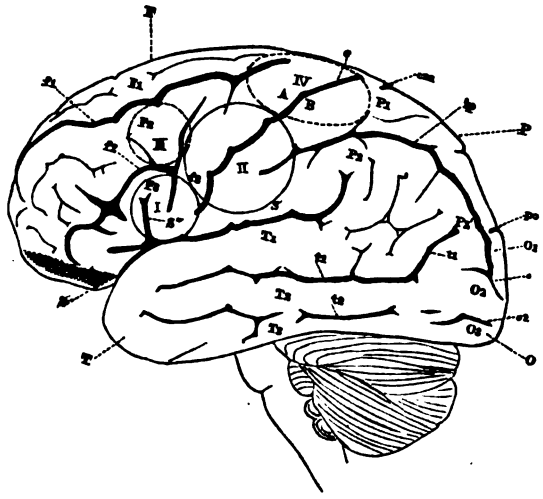

FIG. 9.

Modified from Ferrier; letters and figures the same.—S, Fissure of Sylvius; c, Fissure of Rolando: po, Parieto-occipital fissure. A, Ascending frontal gyrus: B, Ascending parietal gyrus; F_3, Third frontal gyrus; P_3', Gyrus angularis. Circle I., Seat of lesions which (on the left side) cause aphasia. Circle II., Seat of lesions which convulse or paralyze the upper extremity of the opposite side. Dotted Circle III., Seat of lesions which probably convulse or paralyze the face on the opposite side. Dotted Oval IV., Seat of lesions which probably convulse or paralyze the lower extremity of the opposite side. These districts receive their blood-supply chiefly from the middle cerebral artery.

The last gyrus of clinical importance is the next below the inferior parietal and its extension toward the occipital lobe, the angular gyrus, so-called (P_3' Fig 9). Some recent clinical and post-mortem facts would seem to connect it with movements of the eyelids and upper face. Besides, the paracentral lobule is of importance to us, because we know that its destruction is followed by descending degeneration.

The cerebral convolutions are supplied with blood by branches of the anterior, middle, and posterior cerebral arteries, and an exact knowledge of the distribution of these trunks and their ramification is of the utmost importance in the study of localization of lesions, inasmuch as one of the most common pathological processes by which destruction of convolutions is caused, is embolism, or plugging of one of these arteries.

In general terms, the anterior cerebral artery supplies the inner face of the hemisphere as far back as

*Delivered at the College of Physicians and Surgeons during the months of December, 1877, and January, 1878.

the occipito-parietal fissure; the first, second, and (very partially) the ascending frontal convolutions.

The middle cerebral artery, or the Sylvian artery, is the most important physiologically, as it supplies all the convolutions mentioned above as concerned in the production of voluntary movements, viz., the third and ascending frontal, ascending, and first and second parietal convolutions. Easily recognized branches of the middle cerebral artery furnish blood to the third frontal (first branch in the fissure of Sylvius), to the ascending frontal, to the ascending parietal; a fourth branch extends as far as the angular gyrus, and a fifth supplies the first temporal convolution.

The posterior cerebral artery supplies the remainder of the temporal lobe and the whole of the occipital.

It might not quite be out of place to state here that, according to Charcot and Duret, the basal ganglia of the brain receive their blood through small branches which leave the great arteries very near the origin of the circle of Willis. The anterior part of the nucleus caudatus is supplied by arterioles derived from the anterior communicating artery, and from the first portion of the anterior cerebral artery. The nucleus lenticularis and the anterior part of the thalamus opticus are vascularized by branches of the trunk of the middle cerebral artery before it enters the Sylvian fissure. The larger part of the optic thalamus is supplied by vessels coming from the second portion of the posterior cerebral artery beyond the circle of Willis. Finally the inner aspects of the thalamus and the walls of the third ventricle receive branches from the posterior communicating artery, and from the first portion of the posterior cerebral artery within the circle of Willis.

To return to the arteries of the cortex. Ramifying in the pia covering the convolutions, they penetrate the nervous tissue in a peculiar manner, in the shape of long and straight branches, which supply the various layers of the cortex by means of horizontal branches, and ultimately, in small numbers, and greatly reduced in size, reach the white substances. A most important peculiarity in the superficial and deep cortical circulations is the absence of anastomosis between arteries of any great size. As to the exact amount of anastomosis there is a difference of opinion between the two original observers in this matter—both equally competent—Duret, of Paris, and Heubner, of Leipzig. The former maintains, and pathology supports him, that there is next to no anastomotic circulation upon or in the cortex (except through capillaries), while Heubner thinks that considerable branches of the great cerebral vessels open into one another upon the surface of the brain. The importance of this point for the prognosis of embolism of the cerebral arteries is enormous, and for my part I would say that I am disposed to consider Duret's statement as more applicable to practice.

I now pass to a very short account of the physiology of the cortex. My statements upon this matter will be all the briefer because an excellent and full account of the physiology of the cerebrum is accessible to all of you in Prof. Dalton's "Treatise on Physiology." Dr. Dalton himself has taken an honorable part in the researches which have, in the last five years, revealed unsuspected properties in the cortex of the brain.

First. We now know, since the experimental researches of Fritsch and Hitzig (1870), and of Ferrier (1873), that the cortex of the brain is excitable; *i. e.*, that galvanization or faradization of the cortex produces muscular movements in the body and limbs. This fact, standing out in direct contradiction to the teaching of all physiologists from Magendie and Müller, is a monumental acquisition to biological science.

Second. Very numerous researches by Hitzig, Ferrier, and a host of others, appear to have established beyond question that a certain relation exists between well-defined portions of the cortex of one hemisphere and limited muscular groups (almost individual muscles) in the opposite half of the body. The areas of convolutions whose irritation by electricity is followed by definite movements of peripheral parts have been denominated motor centres, or psycho-motor centres; and a large number of these centres have been determined by Prof. Ferrier and by Prof. Hitzig, upon the brains of dogs, cats, and living monkeys whose brains bear a certain resemblance to the cerebrum of man. While knowing of a few opposing experiments which would seem to show that there is no constant relation between the spot irritated and the resultant movement, I am bound, by the weight of evidence and by the wonderful accord between the researches of various experimenters, to accept the facts as stated above.

Third. The excitable district of the brain is its median group of convolutions, including (as sketched upon a human brain, after experiments upon monkeys) the second, third, and ascending frontal convolutions, the ascending and first parietal convolutions. This excitable district or zone includes, as you perceive, gyri which receive their blood-supply by branches of the middle cerebral artery, with the exception of the second frontal gyrus. As my chief object is not physiological teaching, I prefer simply to enumerate the cortical centres as laid down by Ferrier, not encumbering the diagram with a representation of them.

On the posterior extremity of the third frontal gyrus, near the fissure of Sylvius, is a centre for the movements of the lips and tongue (a speech-centre according to the teaching of pathology); this is numbered 9 and 10 on Ferrier's plate. Next in order, upon the lower part of the ascending frontal convolution are centres for movements of the elevators and depressors of the angle of the mouth; numbered 8 and 7. Still higher on this gyrus is a centre for movements of the forearm and hand; numbered 6. Upon the upper two-thirds of the ascending parietal convolution are several centres for complex movements of the hand and wrist; designated by Ferrier, *a*, *b*, *c*, *d*. Much farther forward, upon the hemisphere near the great longitudinal fissure, is an extensive region embracing the posterior parts of the first and second frontal gyri, governing lateral movements of the head, elevation of the eyelids, and dilatation of the pupil; numbered 12. Immediately behind this, near the longitudinal fissure, upon the posterior extremity of the first frontal convolution, is a centre for extension and forward movements of the hand and arm; numbered 5. The posterior (inner) ends of the ascending frontal and ascending parietal convolutions contain centres (not clearly differentiated) for complex movements of the arms and legs together; numbered 2, 3, and 4 on Ferrier's plate. Finally, behind these on the superior parietal lobule is a centre for movements of the leg and foot; numbered 1.

The sensory centres of Ferrier occupy various parts of the inferior parietal lobule, the gyrus angularis, the second occipital, and first temporal convolutions. Although the experiments of various observers make it exceedingly probable that these inferior and posterior portions of the hemisphere are connected with general and special sensory functions, yet, as human pathology has so far thrown no light upon these questions, I shall hereafter confine myself to the study of the motor districts of the convolutions.

Not to weary you by the citation of the now very numerous cases in which localized cortical lesions,

as tumors, abscesses, clots, softening, pressure-effects from bone or thickened meninges, have given rise to definite symptoms, in close or even almost exact agreement with the data obtained by faradizing the cortex, I shall state in a general manner the tendency of these recent clinical and post-mortem studies.

In the first place, it appears almost absolutely certain that in man a lesion involving the posterior part of the third frontal convolution (on the left side usually) causes aphasia; *i. e.*, impairment or loss of articulate speech, or even of language in general. It would seem, besides, that (1) lesions of the same part on either side of the brain produce paresis of many muscles concerned in lingual and pharyngeal movements; (2) that lesions of the anterior folds of the island of Reil, convolutions which are continuous with the third frontal, may also produce aphasia; and that (3) loss of speech may result from injury to the white substance lying between the third frontal gyrus and the basis cerebri. I believe, you observe, in a not too limited localization of the motor functions exerted in language, and would graphically represent this by the circle marked I. in Fig. 9.

In the second place, lesions limited to the inferior portions of the ascending frontal and parietal gyri have produced spasmodic and paralytic phenomena limited to the upper extremity of the opposite side. I am disposed to admit as highly probable that these parts are connected in the healthy living man with the various voluntary movements of the arm and hand. This zone is represented in Fig. 9 by circle II.

I am not prepared to go farther in admitting pathologically proved cortical centres, but would add that there are some reasons for believing that future autopsies will locate one centre for the external facial muscles just forward of the two centres named above, viz., the region included in the dotted circle III.; and another for movements of the legs upon the upper parts of the ascending frontal and parietal, as roughly indicated by dotted oval IV.

As regards sensory cortical centres, I have already said that we have as yet no pathological data for their study.

Having thus expressed myself about the question of cortical centres in man, I pass to the more clinical study of symptoms observed when the cortex is injured.

First. What are the symptoms of localized lesions involving the cortex alone, or the cortex and a minimum of subjacent white matter? The symptoms differ vastly in accordance with a rule laid down years ago by Brown-Séquard, according as the lesion is an irritative or destructive one; and besides, they vary according as the lesions are within the excitable cortical region (defined *supra*) or outside of it. We can clear the ground pretty safely at once by admitting that lesions irritating or destroying convolutions not embraced in the motor zone produce no symptoms at all. Large parts of the frontal, temporal, or occipital convolutions may be injured or utterly destroyed without the patient showing during life any special symptoms of organic cerebral disease. This statement is based upon the study of recent cases only, though I doubt not that in the literature of the century numerous apparently contradictory cases might be collected. In considering this negative proposition, one proviso must be borne in mind, viz., that if the lesions of these unexcitable districts involve the dura mater, convulsions and localized cephalalgia may occur. Of this I have seen one marked example. We are now prepared to study the symptoms of lesions in the excitable or motor zone of the hemispheres, as indicated by the various circles in Fig. 9.

1. The symptoms of an irritative lesion of these parts consist in convulsions, with or without subsequent transient paralysis; *e. g.*, such a lesion in circle III. (Hitzig's case) would give rise to spasmodic movements in the superficial muscles of the face on the opposite side, with slight paralysis. Irritative lesions of the regions inclosed in circles II. and IV. will cause convulsions limited to, or first appearing in the hand and arm, or foot and leg, of the opposite sides. As regards circle I., Broca's speech-centre, we know little of the effects of its pathological irritation. In one case which I have placed on record, a thickening of the meninges involving the third frontal convolution of the left side produced intermittent and incomplete aphasia.

It was by the close study of the clinical and pathological aspects of cases of localized epilepsy (fingers and hands), that Dr. J. Hughlings Jackson was enabled to form his theory of motorial discharges from irritation of the cortex cerebri, and thus pave the way for Ferrier's admirable researches. Dr. Jackson must, I think, be considered, after Prof. Broca, as the founder of our present growing doctrine of cortical localizations.

2. Destructive lesions of portions of the excitable district produce paralysis in peripheral parts across the median line. The symptoms will, to a certain extent, correspond with the *precise* location of the lesions, very much as in irritative lesions; *e. g.*, embolism of the first branch of the middle cerebral artery on the left side will cause softening of the posterior part of the third frontal gyrus, with the symptom aphasia. A destructive lesion of the principal part of the motor zone on the right side will produce left hemiplegia without aphasia; but if this lesion occupy the left hemisphere, loss of speech will co-exist with the paralysis.

It must be added that secondary descending degeneration ensues after destructive lesions of the motor regions of the cortex, and that we have late contracture or rigidity of the paralyzed limbs as part of the symptom-group.

Negative characters of these cortical lesions are preservation of sensibility in the paralyzed parts, and (except with epileptic attacks) preservation of consciousness, and incompleteness of paralysis.

In the next place, let us inquire what are the symptoms produced by diffused lesions of the cortex. As exemplified in acute meningitis, the chief symptoms are delirium, convulsions, and pain; evidences of intense irritation. The coma and paralysis which follow may in some degree be caused by impaired nutrition of the cortex, but more probably by circulatory and tension-changes in the whole encephalic mass.

There is a much better disease for studying the effects of lesions of the surface of the brain, both irritative and destructive—I mean general paralysis of the insane, or, anatomically speaking, diffused chronic meningo-encephalitis. The affection is very common, and has been thoroughly studied clinically and pathologically. From these studies we learn that in the first stage of the affection there occur fibrillary contractions in many muscles of the tongue, face, and limbs; that speech is made tremulous and jerky; that there is over-ideation and even acute delirium; that gradually memory and judgment become impaired, and a semi-paralytic and semi-ataxic condition develops in the limbs. Later the mental faculties are abolished; a stage of dementia with occasional gleams of delirium (exalted notions), and integrity of the organic functions char-

acterize the disease. The attempt is now being made to show that when the meningo-cortical changes are limited to the frontal lobes the symptoms are mainly psychical; when the lesion involves the motor districts alone we observe abundant fibrillary tremors and pseudo-paralysis; and, finally, if the occipital lobes are affected, sensory symptoms (hallucinations) predominate. As yet not much support has been obtained for such a distinction, which appears very tempting upon physiological grounds. It should not be forgotten, in using cases of general paralysis for the study of the question of localization, that the disease is one in which lesions exist in many parts, or almost all the parts of the cerebro-spinal axis.

The question of the localization of functions in the cerebral convolutions, and that of the possibility of diagnosticating their lesions are as yet in their infancy; we need numbers of exact observations to decide it one way or the other. Just now, I believe that the presumption is in favor of a positive answer; there are many facts supporting this affirmative. The clinical and post-mortem facts have just been referred to, and I shall close the lecture by recapitulating the various anatomical, physiological, and pathological evidence in favor of the existence of motor centres in the cortex.

1. Coarse anatomy enables us to trace bundles of fibres upward from the motor tract of the medulla and pons, into the internal capsule as far as the convolutions which are grouped about the fissure of Rolando. By its aid we can also trace sensory nerve-fasciculi from the posterior regions of the pons to the occipital and temporal lobes, and their cortex. Such gross dissections are, however, condemned as unreliable by some authorities.

Microscopic anatomy shows that the so-called motor gyri are rich in large cells; nay, that they alone contain the "giant-cells" of Betz, that is, ganglion-cells, which in size and number of processes bear a remarkable resemblance to the unquestionably motor ganglion-cells of the anterior horns of the spinal cord and the medulla oblongata. In the motor convolutions these giant-cells are found in little clusters of three, five, or more, in a section, imbedded among the large ganglion-cells of the third layer.

2. Experimental physiology teaches us that electrical irritation of this zone, and of this zone only, produces muscular contraction in parts on the other side of the median line; and, further, that this zone may be divided into a number of "centres" for various small parts, tongue, face, arm, leg, etc.* By experimentation we also learn that slicing or burning off these cortical centres produces partial paralysis of peripheral parts on the opposite side of the body, with precisely the same correspondence between centres and muscular groups as the irritative experiments demonstrate.

By the latter mode of experimenting applied to the occipital and temporal convolutions (Ferrier, H. Munk, and others), it is made highly probable that there is a certain relation between parts of these gyri and the organs of special and general sensibility across the median line.

3. Pathological anatomy (recent cases) demonstrates (*a*) that destructive lesions of the motor regions of the cortex (and of the paracentral lobule) produce descending degeneration throughout the direct cerebral motor tract extending into the lateral columns of the spinal cord; and (*b*) that there is a remarkable correspondence between certain localized spasmodic and paralytic symptoms observed during life, and lesions irritating or destroying certain definite spots in the motor zone of the cortex.

* Still more recent researches by MM. Franck and Pitrès show that after removal of the cortex in the excitable zone faradization of those portions of white substances which are then exposed (anterior half of the internal capsule) gives rise to similar (in kind and in distribution) movements in peripheral parts across the median line.

Original Communications.

YELLOW FEVER: ITS PROBABLE ORIGIN THE GREAT DESERT OF AFRICA.

By E. B. TURNIPSEED, M.D.,

COLUMBIA, S. C.

It seems, from the means of research at my command, that in all the inquiries of those who have written on the origin of yellow fever, none have gone beyond the Western Hemisphere.

Although extensively written upon by Lieut. Maury and others, with an eye single to their bearing upon physical science, physicians have entirely ignored the influence of the trade-winds upon the production of diseases.

According to the investigations of Lieut. M. F. Maury, the Great Desert of Africa is a region of hot and dry winds. By the month of June this desert is heated up sufficiently to bring in the rain-winds, these rains continuing in Middle Africa incessantly until late in autumn, and making the rain season of about six months' duration. The remainder of the year, and until the commencement of the next rain season (June), is, of course, the hot and dry season, making at least six months in which vegetable decomposition is going on.

Also, the soil itself may contain poisonous elements, which, when acted upon by a burning sun, with these alternations of excessive hot, dry, and rainy seasons, are given off to be borne by the trade-winds in their courses, to be hereafter described.

The great difference of temperature between the day and night of the Great Desert may also have an influence, the air being 174° by day and 24° by night [Duveyrier].

These trade-winds pass in a southwesterly direction until they reach the equator, then change to a northwesterly course, passing over the West India islands, and striking the coast of the Gulf of Mexico, as well as a portion of the Atlantic coast.

The barren wastes of Northern Texas, New Mexico, and the regions around in summer glow like furnaces, and the heated air ascends from them in immense columns. This produces an indraught from the sea, extending out from the centre of disturbance to the distance, says Lieut. Maury, of 6,000 or 7,000 miles.

The tendency of diurnal rotation, says the same author, on the Mississippi, is to throw the flat-boats, rafts, etc., upon the west bank, and that it is precisely the same force which gives the trade-winds their *easting*. Hence, if I am correct in my theory in regard to the production of yellow fever, this will account for the disease not appearing far to the west of the above river, and its terrible ravages far into the interior of the State of Mississippi; and, further, its tendency always to appear east of the line whence the trade-winds strike the Gulf coast, and never west.

The intensely heated and rarefied air, passing over Central Africa, during the rain season, when the poisonous elements are being constantly and rapidly

generated, would, of course, take up this element in great abundance; and as moisture is added in large quantities while passing over the immense area of sea-water, these trade-winds are well suited to deliver their living burden on our shores, prepared for the addition of the malaria necessary to intensify its malignity.

As these winds, like all others, are somewhat subjected to changes in their direction, owing to causes not necessary here to discuss, I would, in all sincerity, ask if this may not account for the appearance of this fever only in certain localities, either on our Gulf or Atlantic coast, in any given season, while all other portions are exempt.

So far as my investigations have gone, I find that all those who have made any registrations of the directions and durations of winds while this fever prevailed, have confined themselves to the winds near the surface of the earth, not regarding the super-strata of air, which may account for the seeming incongruity in all efforts to identify the origin of the poison of this disease with the prevailing winds.

It is plain to the unbiased mind that these trade-winds, as stated above, heavily laden with moisture, meeting the sub-strata of heated and rarefied air from the land, would, according to well-known laws, dip down and rush in to fill up these rarefied spaces, thus seeming to come from the land instead of the sea. We are told by Humboldt that the farm of the Encero, in Mexico, the height of which is 928 metres (3,243 ft.), forms the superior limits of the vomito. La Roche (vol. i., page 117), says this fever, in 1812, appeared on Brimstone Hill, St. Christopher, at an elevation of 700 feet, and four times (1817, 1825, 1827, and 1831), at Stony Hill, Jamaica, the height of which is 1,360 feet. The greatest height yet given in this country is said to be 600 ft. (at Gallipolis, Ohio.) The reason why it is not propagated to higher points of evelation in the United States, is the absence here of that degree of atmospheric heat which is indispensably necessary for the elaboration of the native morbific agent, which is the only means through which to fit the original element for propagation.

In the Eastern Hemisphere yellow fever has appeared at Cadiz, Xeres, Carthagena, Malaga, Alicante, Seville, Barcelona, and other cities of the coast and interior of Spain. It has prevailed at Gibraltar, Rochefort, Lisbon, and Leghorn. This summer a violent epidemic of yellow fever has broken out along the Senegal river, in Northern Senegambia, western coast of Africa, in the towns of Goree, Refusque, and Dakar. In the Western Hemisphere it has visited part of the coast of South America, the West India Islands, the contiguous coast of Colombia, Guatemala, and the extensive shores of the Mexican Gulf, sweeping from Cape Catoche on the west to Cape Sable on the east, and running thence along the coast of North America to Boston, including in its occasional ravages every intermediate city and town. The cities of the Eastern Hemisphere in which this fever has appeared, are directly in the line of a set of currents springing from the part of Northern Africa immediately above the Great Desert, and passing north and northeast, and are perhaps identical with the so-called sirocco winds. This tracing of the trade-winds and their track corresponding fully with the cities which have been invaded, and its non-appearance anywhere in the world outside of the prescribed line, goes far to corroborate my theory of this poison; and until these facts are satisfactorily refuted I will hold this opinion, and at some future time more fully elucidate the testimony.

Conclusions.—So far as I have gone in my researches into the literature of yellow fever, there has been nothing adduced by any author to disprove my premises, and I think I have gone very far to prove that my theory is substantiated by all the heretofore published testimony in the simple relation of facts in regard to this disease.

In order to verify the theory herein advanced, investigations should be made arranging balloons with cords sufficiently long to let them up perpendicularly over the cities where this disease prevails, with some one in charge capable of making the necessary thermometrical and barometrical investigations several times during the twenty-four hours. Also, so inclosing portions of the air constituting the super-strata of currents as to prevent its escape, and to be analyzed by competent chemists.

As this article is directed simply to investigation in regard to its origin, I will ask indulgence in merely giving to the reader a suggestion I made some years ago in the treatment of yellow fever. This was done in a written communication to physicians of eminence, then engaged in the treatment of this disease, which was prevailing at New Orleans, Shreveport, Memphis, and other cities. It is a simple one—the inhalation of oxygen gas. The reasons then advanced were briefly stated as follows: as the poison which generates this terrible disease is acknowledged by scientists to be imbibed through the lungs and skin, and as oxygen gas is equally acknowledged to be the element supplied by atmospheric air as the great health-preserver, being the means through which the blood is oxygenized, so the lack of proper oxygenization is evidently one of the great troubles in the treatment.

Also, it is well known that in all such poisons medicine can only assist nature in the process of elimination, and as the proper oxygenization of the blood is absolutely necessary in aiding the kidneys, bowels, skin, and lungs in performing this work, we should give nature the air she demands by supplying that which is needed in quantities sufficient to perform the work. Recent trials, so far as made, have confirmed my opinions, and this agent promises much in the treatment of this disease.

COLUMBIA, S. C., Oct. 3, 1878.

EXTRA-UTERINE PREGNANCY IN DOUGLAS' CUL-DE-SAC.

FŒTUS EXTRACTED THROUGH THE VAGINA—RECOVERY.

BY A. H. GOELET, M.D.,

NEW YORK.

MRS. DELPH, aged 26 years, mother of three children, last of which is fourteen months old, consulted me for metrorrhagia on the 16th of January, 1878, from which she had been suffering two weeks. Her menstruation reappeared when her last child was nine months old, and remained regular up to the present attack. She complained of weight in the pelvis, but no pain. Examination revealed the uterus somewhat lower than normal, but the probe showed it to be in the normal axis, and two and a half inches in length. A Hodge's closed lever pessary was introduced, and she was put upon Squibb's fluid extract of ergot, twenty-five drops five times a day, and directed to keep quiet. The second day the medicine was given it produced nausea, which was the only time this symptom was present throughout the case till septi-

cæmia set in. The ergot checked the flow somewhat, but it did not cease entirely.

She continued to do well till the 2d of February, the flow being bad only when she exerted herself too much. At that time she thought she had strained herself, for after lifting a heavy tub of water, she immediately felt faint and chilly, and from this time experienced acute pain in the pelvis, which was aggravated whenever there was a movement of the bowels.

On the 9th she consulted me for the relief of the pain, which had become unbearable. A digital examination revealed a large, hard tumor in Douglas' *cul-de-sac*, which obstructed the rectum and forced the uterus upward and forward against the pubes. Her pain was also much aggravated when she stood up, and even when she sat up in bed, and there was some tenderness over the abdomen with tympanites. The diagnosis was hematocele. She was ordered to retain the recumbent posture, and to have her bowels moved only by injection. Opium given for the relief of pain, and the ergot discontinued.

10th.—Patient is more comfortable, free from pain, except when there is a movement of the bowels. Metrorrhagia still continues. Appetite good.

11th.—Condition about the same.

13th.—Found patient very despondent, and feeling worse; pulse full and temperature elevated.

14th.—She is some better. The flow is considerably increased, and is offensive, but she says it is the regular time for her monthly sickness.

16th.—Dr. Geo. T. Harrison was called in consultation, and agreed with me in my diagnosis, excluding extra-uterine pregnancy, because there was no enlargement of the uterus, and no history of amenorrhœa nor other symptom of pregnancy. There was at this time considerable tenderness over the abdomen, and the tumor was exquisitely sensitive. She was ordered hot-water injections twice a day, followed each time by hot solution of muriate of ammonia, to be commenced after the flow had somewhat checked.

17th.—Found patient comfortable, with less pain and tenderness of the abdomen.

19th.—The flow has nearly ceased. Injections commenced.

21st.—Her condition seems much improved. She thinks the injections have given relief.

24th.—Condition same.

26th.—Increased pain and tenderness of the abdomen and tympanites. Increased temperature. Ordered 5 grs. quinine night and morning.

27th.—Chill. Temperature still higher. Symptoms much increased in severity. Ordered 20 grs. quinine at night, and 10 grs. in morning.

28th.—Temperature much lower, and her condition much improved.

March 1st.—Her condition is much worse. Temperature higher again. Advised her to have the tumor incised, but both the patient and her husband preferred to wait.

2d.—She became much worse, and sent for me to have tumor opened, but Dr. Harrison was unable to attend, and it was delayed till next day.

3d, 11 A.M.—She is suffering no pain, though she was delirious during the night, and is sinking perceptibly. Every symptom to indicate septicæmia. Arranged to meet Dr. Harrison at 5 P.M. 2 P.M.—I was summoned hurriedly to her, and found her completely prostrated, vomiting and purging; pulse weak; almost extinct; temperature 105½°.

Dr. H. was immediately sent for. A hypodermic of morphine, ℥ vi., checked vomiting and purging, and brandy, hypodermically, revived the pulse somewhat. Having no aspirator convenient, we used a hypodermic syringe, and drew from the tumor some very offensive fluid, serous in quality and bloody colored. A Sims' speculum was then introduced, and an incision made into the tumor. Only a small quantity of the same fluid escaped. On exploring with the finger, a movable mass was felt within the sac, which, when removed, proved to be a fœtus in a state of decomposition, three inches in length, and consequently in the third month of development. The secundines were left undisturbed to avoid the uncontrollable hemorrhage which might follow their removal. The cavity was thoroughly cleansed and disinfected with carbolic acid, and then, to avoid the accumulation of purulent matter, the patient was placed on a bed-pan, and a constant flow of the disinfectant into the cavity established by means of a syphon. This consisted of a stone jar containing the solution of carbolic acid on a table above the bed, and a small rubber tube with a glass tube at the end, which was passed into the cavity. By means of a clamp to the rubber tube, the flow was regulated to pass only drop by drop. Ordered beef-tea and brandy. 11.30 P.M.—Found her quite comfortable and in good spirits. Temperature has been reduced three and a half degrees by the operation.

4th, A.M.—The bed-pan has caused so much discomfort that it is necessary to remove it. A rubber drainage-tube was introduced into the sac, which conducted the outflow into a larger tube, which emptied into a vessel at the side of the bed.

P.M.—There is some pain over the abdomen. Ordered flaxseed-meal poultice with mustard, and gave ℥ vij. of Magendie's solution of morphine hypodermically.

5th, A.M.—Her condition is much improved and the pain has ceased. The constant flow of water keeps the clothes under her wet, and it is thought best to discontinue it. The flow is entirely checked by means of the clamp, which is to be removed every hour, and the full stream allowed to flow for ten minutes. P.M.—Patient does not feel so well as this morning, and the temperature is some higher. The jar containing the disinfectant removed, but the tubes were left in position so a Davidson's syringe could be attached and the cavity thoroughly washed out every hour. Morphine, ¼ gr. given hypodermically.

6th, A.M.—Patient is in good spirits and doing well. Ordered an injection to move the bowels. She has had no passage since the operation. As the tubes would slip out whenever the nurse injected the cavity, they were removed and the female nozzle of the syringe introduced through the incision and left in position. She was ordered to be placed on a bed-pan and syringed every hour. Morphine, ¼ gr. P.M.—Pulse much weaker and temperature higher than this morning, but after thoroughly disinfecting the sac the pulse was strengthened and the temperature reduced one-half degree in half an hour. Morphine, ¼ gr.

7th, A.M.—Appetite bad; takes wine, but cannot eat anything without vomiting it immediately after. There is no pain nor tenderness over the abdomen. The remains of the tumor as felt through the vagina is not very sensitive. Several small detached pieces of the placenta were removed by syringing. The injections to be continued and the patient to have beef-tea, jelly, and wine in small quantities every hour. Ordered pepsine for the relief of the nausea. Omitted the usual hypodermic of morphine. P.M.—Her condition is much improved; nausea relieved. Morphine, ¼ gr.

8th.—Temperature much higher than last night,

because the nozzle of the syringe had slipped out and the syringing was imperfect. Appetite improving; took beef-tea with relish. P.M.—Although the patient is quite comfortable, the temperature is 104 and the pulse weak. By forcibly injecting the cavity removed several pieces of the placenta and some pus.

9th.—Her condition is much improved. She is cheerful and takes food with relish. Temperature lower, pulse stronger.

10th. A.M.—Condition same. The tumor is reduced much in size. P.M.—She had the first natural movement of the bowels.

11th.—Removed the syringe, because the nozzle stops up the opening and prevents free drainage. The husband, who is a very intelligent man, and who has proved himself a most competent nurse throughout, introduces the nozzle every hour and uses the disinfectant.

12th.—The syringe had not been used for four hours, owing to the unavoidable absence of the husband. The temperature was 104, but was reduced to 103 soon after using the disinfectant.

13th.—Found same condition as the previous day, which was unavoidable. This time she was much depressed and nauseated, but was relieved immediately by using the disinfectant. P.M.—Her condition is very much improved. She has eaten well during the day and had a natural passage. Temperature reduced to 102.

14th.—Patient is doing well.

15th.—Appetite is good and she is improving. Here my visits ceased for a time on account of an attack of facial erysipelas, and she was left in charge of my friend, Dr. Harrison, who states that she continued to improve, though the temperature ranged from 100 to 102 from time to time.

When I saw her again, which was on the 15th of April, I found her sitting up, but she was regaining her strength very slowly. There was still some offensive discharge from the vagina which came from a very small opening just behind the cervix uteri. There were no remains of the tumor to be felt. Ordered her to continue the disinfectant vaginal injections and to take a tonic.

May 3d.—She says that the discharge stops sometimes for a few days, then she has high fever, and "something breaks" and the discharge commences again in larger quantity. The opening heals up for a time, but the formation of pus causes fever and forces it open again. Directed her to notify me the next time "anything broke."

20th.—Was called; the discharge, after having disappeared for a few days, reappeared suddenly. I injected into the small opening just behind the cervix compound tincture of iodine. It produced but little pain, and when I saw the patient again two days after she was around as usual and had suffered no inconvenience from it.

When I saw her again, which was about the middle of July, there was no discharge; the opening had entirely healed and she was regaining her strength and flesh rapidly. The discharge had ceased a few days after the iodine was used and had not reappeared. Her menstruation had recommenced the first part of the month.

ADULTERATION OF SANTONIN.—Santonin is said to be adulterated with boric acid. The test is: ignite the specimen, dissolve the residue in boiling water, allow to crystallize, when boric acid separates, and is recognizable in the usual manner.

A CASE OF ATROPHY OF THE LIVER AND PERIHEPATITIS, WITH REMARKS.

By JOHN D. NEET, M.D.,

VERSAILLES, KY.

FANNIE G., æt. 23, married, and the mother of one child, came under observation June 11, 1878, with abdominal swelling.

There was no hereditary tendency to disease manifest in the family history, all enjoying good health, except the mother, who died some years ago of "dropsy." Patient states that she has not enjoyed good health for the past two months, complaining principally of loss of energy and appetite, and a sense of growing weakness until the 8th of June, when she noticed this abdominal swelling. This, however, has not been a source of inconvenience or pain, and only attracted attention by its increasing dimensions.

Upon examination, the abdomen was found very much enlarged, and tympanitic over its entire surface, yet there was no evidence of fluid within its cavity. In consequence of the great tympanitic distention, it was impossible to satisfactorily limit the area of hepatic and splenic dulness; the stomach and intestinal tract gave no evidence of marked deviation from the healthy type, and a careful chemical examination of the urine determined a healthy state of the kidneys. Except slight catarrh of the larger bronchi, there was nothing abnormal in the thoracic viscera.

On June 12th, a rather profuse diarrhœa supervened, with from eight to ten evacuations in the twenty-four hours, and with the discharges considerable gas, without, however, apparent diminution of the abdominal enlargement. This condition was not accompanied by any special constitutional disturbance, like pain or febrile movement, but its effect was marked by progressive weakness, acceleration of the circulation, and patient seems worn and feeble, with pulse 95 and temperature normal.

At my next visit, a few days later, found temperature 101°, pulse 105, and a decided increase in the bronchial catarrh. The abdomen was still distended, and upon examination, elicited signs of fluid within the cavity. She was now losing flesh and strength rapidly, and the determination was made to tap in a day or two, provided there was any increase in the effusion. It was yet impossible to ascertain the condition of the liver by physical examination, and it is strikingly strange that the patient does not complain of anything, and there is not a sign or symptom present to afford a clue to the nature of the existing disease. On the day but one after my last visit, found temperature normal, pulse 105, and a marked diminution in the gaseous and ascitic collection; but, notwithstanding the free administration of opiates and astringents, the diarrhœa persisted. Patient seemed to improve for the next few days; tympanites much less, and there was no evidence of ascites at all. For the first time the limit of hepatic dulness was ascertained, and a decided diminution pronounced. Spleen normal.

On July 10th, a few days later, tympanites, ascites, and bronchial catarrh increased, and patient now complains of a dull and constant pain, limited to the epigastrium. Her appetite and stomach digestion are good, yet her vitality and strength are being rapidly consumed.

Waiving further details for the next few days, suffice it to say, the epigastric pain and diarrhœa continued, the tympanites diminished, and the ascites and

bronchial catarrh disappeared entirely. On the 22d, delirium set in, pain became intense, bronchial catarrh, tympanites and ascites increased; but there was no febrile excitement. On the 23d, had a slight hemorrhage from the stomach, which was repeated on the following day. On the 25th, vomiting and hemorrhage ceased, bronchial catarrh diminished, tympanites and ascites were rapidly disappearing, delirium was more constant, breath very fetid, and urine and fæces passed involuntarily. On the 26th, epigastric pain and hiccough were intense, and convulsive movements were distinct throughout the body. (Examination of urine still gave negative results.) On the 27th, patient expectorated a profuse quantity of frothy mucus, tympanites and ascites entirely disappeared, delirium active, and death occurred at 8 P.M.

At the autopsy, the liver was found firmly adherent to the intestines, spleen, stomach, and a portion of the diaphragm. The breadth and width of the organ were somewhat diminished, while it was not more than from a quarter to a third its normal thickness; indeed, the left lobe was scarcely so thick. It was as flabby as an empty stomach, of a peculiar grayish color, and its surface was for the most part smooth, though *slightly* lobulated in places. The capsule was very much thickened, the parenchyma proper, or cellular substance of the liver, was atrophied, but the connective tissue increase was not very marked within the substance of the organ. There was no evidence of peritonitis at any other point over the surface of the peritoneum. Other organs not examined.

Remarks.—Perihepatitis must be rare, if, indeed, it ever exists as a primary and independent affection, and does not declare itself by signs or symptoms specially and peculiarly its own. The reason for this is quite evident when we recall to mind the anatomical structures which mark the seat of the disease, the dependent relation which they sustain to the organ they invest by reason of the essential conditions of nutrition, and it is at once incumbent upon us to search for the underlying morbid process in some visceral organic disturbance, and not limit it to structures whose healthy nutrition depends, for the most part, upon a healthy state of the organs they invest. Dr. A. L. Loomis has reported a case * almost entirely analogous in its symptomatology and course to the above, in the person of a lady suffering at the time from chronic malarial poisoning, which he regarded as an important etiological factor in the development of the disease. He thought it highly probable that an inflammatory process may have extended from the hyperæmia of the organ, the effect of the malarial poisoning, to the degree of producing the pathological processes declared at the post-mortem. This, to be sure, is sufficiently plausible, but the history of the subject of this report furnishes no evidence of malarial poisoning or syphilitic infection—the two moving causes of the disease. He was not an indulger in spirituous drinks. In short, the case presents nothing that we can accept as tangible etiology. The fact that the liver was found firmly adherent to the adjacent organs would point, unquestionably, to an inflammation of its peritoneal investment. But if this was the starting point of the disease it is not a little strange that it should have been thus confined, and not spread more extensively to tissues, not contiguous, but continuous, as does peritonitis, and more especially when it exists as a primary and idiopathic affection, in the so-called *rheumatic peritonitis*. Moreover, had the disease originated in the peritoneal or fibrous investment of the organ, and produced connective-tissue changes by extension, besides some jaundice—which was present in Dr. Loomis's case—we would have had more or less permanent interference with the portal circulation through the liver, and consequent permanent ascites, enlargement of the spleen, highly colored urine, hemorrhoids, etc. On the contrary, there was no jaundice, the ascites and tympanites were not lasting, the urine was of normal color, there was no enlargement of the spleen, appetite was good, and stomach digestion normal to within a few days of death.

The symptomatology and course of the case were sufficient to exclude *acute yellow atrophy*, but other diseases which were thought to possibly exist are too numerous to mention, and a differential diagnosis could not be made. In the absence, then, of something more plausible, the pathological processes noted at the post-mortem would seem to justify the opinion that the perihepatitis was secondary to a primary atrophy of the liver, in which the liver-substance disintegrated cell by cell. The molecular detritus of the liver-cells acting as a foreign substance may have induced hyperæmia of the organ, and an inflammatory process established in connection with those changes may have extended to its fibrous and peritoneal investment, and produced the adhesions found at the autopsy. General indisposition and disturbed nutrition marked the primary action; tympanites, intestinal catarrh, and ascites supervened when disease attacked the peritoneum; the hematemesis was incident to faulty nutrition in the capillary walls, and the ataxic symptoms, perhaps, to "poisoning by noxious substances which are formed instead of the normal products of the change of tissue" (Niemeyer).

* MEDICAL RECORD, 1876, p. 802.

Reports of Hospitals.

CHILDREN'S HOSPITAL, PHILADEPHIA.

SERVICE OF DR. J. H. HUTCHINSON.

BY J. M. TAYLOR, M.D., HOUSE SURGEON.

(Reported for THE MEDICAL RECORD.)

CONTAGION IN SCARLET FEVER.

ON April 30, 1878, a very severe case of scarlet fever appeared in the boys' ward. The boy attacked occupied a bed near the centre of the room. Coincident with this was a similar case in the girls' ward. Both of these wards are on the second floor. The cases were at once removed to the upper story, where wards are prepared for such contagious diseases as arise among the house patients.

Within a week previous to his removal this boy had been successively changed from two beds to a third, and immediately afterwards these two beds had been occupied by other boys. No other case occurred in either of these wards. In a ward on the third story, front, were a number of children suffering from whooping-cough, a disease which had run riot throughout the house, but was then upon the decline. The ward adjoining this was the one devoted to the scarlet-fever patients. Among the whooping-cough cases on the 2d of May, a girl manifested the characteristic symptoms of scarlet fever, and was transferred to the adjacent ward. Not another one of these cases of pertussis took the scarlet fever, notwithstanding the fact that the girl already attacked was large, and was

suffering merely from keratitis in addition to the cough. She acted as nurses' assistant, and in this capacity repeatedly came in contact with the other children in the ward.

Ten days after the last date, on May 12th, two very mild cases, occupying beds very remote from each other, broke out in the back ward on the second floor. These last were so faintly marked that they might have been overlooked but for the suspicions excited by the prevalence of the disease. On the 1st of June one other case occurred in this ward. On May 4th another case occurred, a boy suffering from a slight deformity, and confined to the "play-room," so-called—a room below the first floor, opening directly upon the play-ground. The children from this part of the house seldom come in contact with those in the upper wards, and then only in exceptional cases. Twenty-four days after the isolation of this last boy, one other case, that of a girl, occurred in the play-room.

From these facts it would seem that *contagion* is *not* the most important element in the spread of this disorder. We must rather look to individual susceptibility coupled with similarity of circumstances. Nor has mere physical weakness much to do with this susceptibility. Lying very near most of the cases above mentioned were children suffering from a great variety of troubles, both medical and surgical. Only one or two in an entire ward were attacked. During the time which elapsed from the incipiency of the first to the convalescence of the last case, between eighty and ninety general patients were treated in the house. Only nine of these took the scarlet fever. Of all the patients in the house, but half had had the scarlet fever. The first boy attacked had been in the house seven weeks before the manifestation of the angina, which, in his case, was unusually severe. He could scarcely have come in contact with any one carrying the "seeds of the fever" after entering the house. This case was by far the most severe of all, resulting in death. None of the others died. Each case was milder than the preceding one—an evidence that the most susceptible are those first attacked. To but one case was there the sequela of albuminuria. This child was also suffering from a severe bronchitis, and at the outset of the fever was much emaciated. The presence of the albumen was first detected on the nineteenth day. There was little else to suggest danger, except a trace of blood in the urine. Prompt treatment held this symptom in check, however, and by three weeks' time the blood and albumen had both disappeared from the urine. The bronchitis meanwhile was all gone, and the child improved in color and flesh. Keratitis in two cases was much improved by the fever.

Service of Dr. H. Lenox Hodge.

Case of Rapid Recovery from Complete Luxation of Great Toe.

(Reported by Dr. J. M. Taylor.)

N. C., æt. 8 years; admitted April 30, 1878. This lad was brought to the house and treated by Dr. Taylor within about half an hour after the receipt of the injury. A "Belgian block" had fallen with violence upon his foot, causing very great contusion and laceration.

The articulating surfaces were widely separated, and the synovial membrane entirely exposed. The transversus pedis, adductor pollicis and flexor brevis muscles were all torn from their insertions.

The case indicated amputation, but it was determined, in view of the rare vitality of the boy, to make an effort to save the part. The resident, Dr. Taylor, at once used a simple dressing of cold water and tinct. opii, and on the day following, in accordance with Dr. Hodge's directions, used liquor plumbi subacetatis and tinct. opii. This treatment was continued for a week, and followed by simple cerate dressing.

The object in calling attention to this case is, to give prominence to the following facts: from the time of the first dressing there was not the least complaint of pain or tenderness. There was no inflammation manifested. The external wound healed by first intention, and by the tenth day the boy was out of bed and maltreated a neighbor in the temporary absence of the nurse from the wards.

By the fourteenth day there was perfect, active motion of the whole toe, and the patient was discharged.

In these days of advanced surgical knowledge, many specific forms of dressing are advocated. Men of such eminence as Lister, Gamgee, etc., claim pre-eminence, and quote favorable cases to establish their several positions. There are the wet, the dry, the antiseptic, and many other forms of dressing. Here we have the case of an individual with youth and a sturdy constitution that under any one of these systems would doubtless have done well.

Progress of Medical Science.

Treatment of Syphilis without Mercury.—Dr. Boileau stated before the British Medical Association that for several years he had not only treated, but he believed cured, cases of syphilis among soldiers, without the use of mercury. His principle had been to avoid mercury as much as possible; he treated most of the cases without administering any form of that remedy, and very rarely resorted to fumigation or inunction. He believed, however, that it would have been better to have discarded all remedies having mercury in their composition, although he occasionally used them with the hope of obtaining good local results. He believed that in the cases where mercury was locally applied, the actual amount absorbed into the system must have been very slight. His treatment had consisted in the frequent employment of hot-water baths, confinement to bed, scrupulous attention to cleanliness, full hospital diet (generally with a pint of the best ale daily), and the internal administration of iodide of potash, Dover's powders, nitrate of potash, chlorate of potash, etc. Several illustrative cases were briefly reported. In reply to some objections raised against his paper, Dr. Boileau said that his cases were matters of fact, and the results did not admit of discussion. He admitted that his cases were under exceptionally favorable circumstances. He saw no reason why he should give mercury if he could do without it. Local sores certainly healed without its use, and all his cases were, as far as he knew, at present healthy.—*The British Medical Journal*, August 24, 1878.

Application of the Poro-plastic Felt Jacket.—On Wednesday, August 8th, Mr. Adams gave, at the Royal United Hospital, a practical illustration of the mode of applying the poro-plastic felt jacket during suspension in disease of the spine and lateral curvature, in a manner similar to that recommended by Dr. Sayre, in the application of the plaster-of-Paris jacket. Mr. Adams considered that the American system of treating spinal disease with angular curva-

ture, as well as some cases of lateral curvature, by suspension, and the application during suspension of a plaster-of-Paris jacket, was the greatest advance recently made in the treatment of these affections. The system of extension by the head, as well as by the arms, is said to have been of ancient date. It was certainly practised by Mr. Stafford, in London, more than thirty years ago, and the apparatus for head-extension is figured in his work on the spine. Mr. Adams had for more than twenty years practised extension by the arms, using for this purpose the trapeze bar, in cases of lateral curvature, and the effect of extension in straightening the spinal curvature was well known. English surgeons, however, always trusted to recumbency and gymnastics for retaining any advantage gained. The originality of the idea of retaining the advantage gained by suspension, by the application of a plaster-of-Paris bandage or jacket whilst the body is suspended, is undoubtedly of American origin, and it is to Dr. Sayre that English surgeons are indebted for the knowledge of this system of treatment. The substitution of the material known as plastic felt, which has been used for some years both in America and in Europe, for fracture splints, etc., for the plaster-of-Paris bandage or jacket will, it is hoped, overcome many of the objections raised against the plaster-of Paris jacket. Experiments with the poro-plaster felt were made, at the suggestion of Mr. Adams, in the early part of the present year, by Mr. Ernst, with the assistance of the inventor, Mr. Cocking. Mr. Ernst has now brought the poro plastic felt jacket to a high degree of perfection, as shown by its application to several cases before the meeting. Mr. Fisher has, at the National Orthopædic Hospital, applied a large number of these jackets, and considers them to be quite as efficient, and in many respects superior to the plaster-of-Paris jacket. These poro-plastic spinal jackets cannot be made out of the sheet felt, but must be manufactured on wooden blocks, and are kept in different sizes. After the proper measures have been taken, one of the jackets approximating to the required size is softened in an oven or hot air-chamber, at a temperature of 180°. This occupies from three to five minutes, during which time the patient is being suspended, precisely in the same way as when Sayre's plaster-of Paris jacket is applied, and a tightly fitting gauze vest is drawn over the body. The body is then wrapped around with a sheet of cotton-wool, which forms a soft padding, and is useful as a non-conductor of heat. This was suggested by Dr. Yandell, of Kentucky. The softened jacket is then applied, and rapidly moulded to the trunk whilst the patient is suspended. It is then buckled in front, and a broad bandage firmly and rapidly applied round the jacket from the top to the bottom, the patient still being suspended. In two minutes from the time of application the jacket will be found to be cool, and firmly set, and the process complete. It can be removed at pleasure, for the purposes of sleep, washing, and gymnastic exercises, so useful in lateral curvature. It can be softened and reapplied, as improvement in the spinal curvature takes place, and the same jacket will last a year or more.—*The British Medical Journal*, August 24th.

A Renal Form of Typhoid Fever.—We have already had descriptions of typhoid fever in which the cerebral, cerebro-spinal, and thoracic symptoms predominate. Dr. Charles Amat describes in his thesis a renal form, with regard to which he formulates the following conclusions:

1. The typhoid poison attacks the kidneys in the same way as the other organs, the brain and lungs, etc.; hence the necessity of admitting a renal form.

2. Recognized by M. Gubler, M. Al. Robin, and Hardy, this form has not yet been the subject of a complete description.

3. It possesses a complete symptomatology—slight diarrhœa, considerable debility, extreme adynæmia, earthy color of skin, abundant epistaxis, rapid delirium, very high temperature, inconsiderable rash, and a special urological group of symptoms: sanguinolent coloration, odor of boiled bread, containing sediment formed of the red and white globules; albumen in large quantities.

4. The ordinary form differs from the renal form by the greater intensity of the abdominal phenomena, by the more abundant diarrhœa, by the delirium, by the less elevated temperature, by a more confluent eruption. The urine is orange-colored; the sediments are not constant, consisting principally of urates and phosphates.

5. The kidneys present the signs of interstitial nephritis.

6. The renal form may be confounded with the ordinary form, or with primary renal disease.

7. The progress and duration vary. The termination is generally fatal.

8. The variations in the quantity and composition of urine aggravate the prognosis or render it favorable.

9. The patient should be placed on milk diet, and cold baths are contraindicated.—*The Medical and Surgical Reporter.*

The Pathology of Colles' Fracture.—Dr. Hector Cameron, of Glasgow (*Glas. Med. Jour.*, March, 1878), has been so fortunate as twice to have had the opportunity of examining a recent specimen of the fracture after death. In the first, the fracture, although transverse, passes obliquely from above downward and forward, so that while at the anterior aspect of the bone the line is not more than a quarter of an inch from the articular surface, on the posterior, the distance is increased to about an inch. There is some comminution of the lower fragment, and the broken surface of the upper is extremely rough and denticulated. This very irregular and notched character of the fractured surface appears to be usual (Malgaigne), and is of interest in so far as it may cause difficulty in the reduction of the displacement. In this particular instance, although it cannot be said that there is any impaction, a toothed projection on the long fragment so locks the other fragment in its new position upward and backward, that it would be impossible to reduce it except by great force. In the second specimen there is a transverse fracture about three-quarters of an inch above the articular surface of the bone. In front the break is hardly complete, the periosteum holding the fragments together, but allowing them to bend at an angle there, as upon a hinge, so that the lower fragment is, as usual, tilted upward and backward, and has the direction of its articular surface so altered that it looks upward, backward, and outward. On the posterior aspect not only is the fracture complete, but the dense outer covering of the upper fragment is driven firmly into the substance of the lower, splitting it like a wedge into three fragments, which, however, hold closely and securely together. The impaction is complete and irremediable. Although firm extension improves matters, it does not unlock this connection between the two fragments on the back of the bone.—*The Medical and Surgical Reporter*, Sept. 7, 1878.

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE TREATMENT OF CRIME AND REFORM OF CRIMINALS.

II.

In our former article on this subject we referred to the injustice existing as regards imprisonment on suspicion, inequality of sentences, and the present treatment of drunkenness; and we had been led, after an examination of the subject, to the legitimate conclusion that "labor" was of paramount importance both as regards prison discipline, and as a measure tending to reform the criminal.

In contrast to this humane and beneficent system, whereby the criminal is surrounded by all possible reformatory influences, stands the barbarous, cruel, unchristian solitary confinement system in vogue in Pennsylvania. It is incomprehensible how such a system—without pretensions to public economy or reformation of criminals, parallel only with the system in vogue centuries ago—can flourish in the nineteenth century, and in "progressive and enlightened" United States of America!! This "man's inhumanity to man" Charles Dickens graphically denounced many, many years ago; his words should have awakened "those who devised this system of prison discipline, [who] do not know what it is that they are doing," to a realizing sense of their crime against human creatures, when read to this effect:

"I am only the more convinced that there is a depth of terrible endurance in it which none but the sufferers themselves can fathom, and which no man has a right to inflict upon his fellow-creature. I hold this slow and daily tampering with the mysteries of the brain to be immeasurably worse than any torture of the body; and because its ghastly signs and tokens are not palpable to the eye and sense of touch, as scars upon the flesh—because its wounds are not upon the surface, and it extorts few cries that human ears can hear—therefore I the more denounce it as a secret punishment which slumbering humanity is not roused up to stay. But now I solemnly declare that, with no rewards or honors could I walk a happy man beneath the open sky by day, or lie me down upon my bed at night, with the consciousness that one human creature, for any length of time, no matter what, lay suffering this unknown punishment in his silent cell, and I the cause, or I consenting to it in the least degree."

It is a disgrace upon humanity. After having travelled this broad desert of wrongs existing in the treatment of criminals, the traveller rejoices in finding one cheering oasis—the Irish system. This has for its groundwork: 1st. The protection of the public from the criminal; 2d. The humane, generous, and moral elevating treatment of the prisoner; and 3d. His reinstatement in the good opinion of his fellow-beings and pecuniary assistance. Here is every incentive to reform; here is the only true system of prison discipline and treatment. We must make a final extract from this valuable document, and this time from the physician's report, showing that reform and the prisoners' good is the study of these exceptionally conscientious officials:

"There has been, however, an earnest effort made in every direction toward protecting the health of the men, which cannot have failed of effecting some good results. Beside the utmost care in the selection of the food, especially during the summer months, the most rigid policing of the yard, the weekly flushing of the sewers, and the cleanliness enforced in the care of the wings, two other measures have been instituted to which I attach a still greater influence.

"The first is a change made over a year ago in the manner of washing down the wings. The former custom was to use large quantities of water every day in mopping down the stone floors, and once or twice a week to turn on the hydrants and literally flood the place; in consequence, the atmosphere was kept in a damp, unhealthy condition, both generating and intensifying disease. Since the discontinuance of this method the amount of severe colds and rheumatism of former years has been materially lessened.

"The other change is in the care of the night buckets. They were well rinsed out and dried, and once a week, on Sundays, a small quantity of a weak solution of copperas was used. Since May, however, they have been cleansed much more thoroughly, and every day about a drachm of copperas in a few ounces of water was put in each bucket. It is hard to estimate the value of this as a sanitary measure, but it has probably had some effect both as destroying and preventing the formation of disease germs."

Lastly, we must consider the executive pardoning power and its exercise. The very existence of such an endowment, except as regards persons imprisoned for crimes against the government, state or federal, is an *admission* of civil injustice. If a man be guilty, and his sentence just, as measured by the standard of offence and not by that of judicial discretion, his excellence of behavior while imprisoned should gain him the respect of, and small favors from, the prison officials, but on no account bring him pardon or a shortened term. Such a law, and its enforcement, might prevent a certain amount of crime; at least, it would be eminently just. Of course the executive should have the power to liberate imprisoned innocent persons.

The remedy for existing injustice as regards imprisonment on suspicion and inequality of sentences we believe to lie in the following propositions:

1. All persons, poor or rich, should not be deprived of their liberty on mere suspicion of guilt, except well-known and old offenders against the law.

[A person caught in the act, or, after subsequent capture, identified by the several witnesses of the act, must be considered as proven guilty, as merely awaiting formal condemnation and sentence.]

2. Since it is the duty of the State to punish crime; since it is paid by the people to do justice—neither more nor less, it is also its duty to furnish officials at its own expense, to keep suspected persons under strict surveillance; therefor it should be compelled to keep its servants domiciled with the party or parties suspected, always at its own expense, to follow and be a constant companion of the latter, but never to deprive them of their liberty, home, or occupation.

3. In case of trial and acquittal of the suspected person or persons, barring cases of acquittal on a verdict of "emotional insanity," "justifiable homicide," or the like, the State should pay the accused and the witnesses for the defence a fixed fee for each day's attendance upon the trial, as well as pay the accused a certain stipulated counsel fee, towards meeting his or her expense in this direction.

4. Speedy trial of all accused persons.

5. No re-trial on mere technical appeals, but simply upon valid proof of witnesses' perjury, illegal exclusion of testimony, or a manifestly unjust charge by the Court (to be judged by the Court of Appeals), or the production of such new evidence as contains proof of the innocence of the accused.

6. Crimes should be graded according to the circumstances attending the commission.

7. Sentences should be proportioned to these grades, each grade bearing its fixed sentence.

8. The jury's verdict should designate the grade of crime. No discretion should be given to the Court, unless it also be the jury.

PROFESSIONAL SECRETS AND PROFESSIONAL OBLIGATIONS.

In another column appears a communication from a physician in this city, calling attention to a very important matter connected with professional secrets and professional obligations. He says very properly that the question, as to whether a physician is or is not culpable in preventing a marriage with a syphilitic patient, is of vital importance. The circumstances detailed in the correspondence are certainly of a painful character, and call loudly for a remedy; but whether the physician can apply it or not is not quite clear. There are so many phases in which to view the subject, and so many circumstances to take into account, that it is difficult to lay down any definite rule of conduct in a parallel case. The physician is always in a professional capacity under a strong bond of secrecy. This is eminently proper, and for reasons which need not be given here, as the latter readily suggest themselves to every practitioner.

Very many, in fact the large majority of medical men, although believing as our correspondent does, that something should be done to prevent an unprincipled scoundrel from giving a loathsome disease to an innocent victim, are quite undecided as to the means to be used. While it seems deplorable that such a crime should be perpetrated in defiance of a possible prevention, it must nevertheless be remembered that the attending physician is neither a detective, an informer, nor an officer of the law, and that, technically and ethically speaking, he shifts the responsibility of the case upon the shoulders of the criminal as soon as he warns the latter of the dreadful consequences of his crime. From a strictly moral point of view, however, the aspect of the question alters itself very materially; so much so, indeed, that no physician could be trusted to give an impartial decision regarding the steps which should be taken to prevent the disease from entering his own family.

THE YELLOW FEVER COMMISSION.

From all accounts, the Commission appointed by Dr. Woodworth is doing good service. A circular informs us that the results of the investigations will be presented at the forthcoming meeting of the American Public Health Association, to be held in Richmond. This is a very proper way of bringing the subject before the people, and we trust that the discussions and papers will be brief and to the point. It is quite certain that the audience will be large and respectfully attentive. We understand that the principal business of the Association during its coming session will be devoted to the subject of the report.

CLINICAL MATERIAL.

The medical colleges in this and other cities are in full operation, and the demand for clinical material will doubtless be active enough to affect the fee market and to discourage the young and hopeful practitioner.

Contagiousness of Phthisis.—Dr. Tappeiner has proved by experiments in Buhl's laboratory, at Monaco, that phthisis is contagious. He mixed the sputa of consumptives with water, and made five dogs inhale the mixture in the form of spray. Two of the dogs were also made to swallow a portion. After a lapse of six weeks the dogs were killed. They presented a general miliary tuberculosis of lungs, liver, and kidneys, and, in the two who had swallowed the matter, of the digestive apparatus also. Carmine, which had been mixed with the inhaled liquid, was found in the pulmonary cells. It is suggested that these experiments are an indication that the air of badly ventilated apartments occupied by phthisical patients may become dangerous to healthy persons.—*The Hospital Gazette*, etc.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 24, 1878.

DR. JOHN C. PETERS, PRESIDENT, IN THE CHAIR.

ENTIRE SCALP DETACHED BY MACHINERY—AN IMMENSE GRANULATING SURFACE.

DR. FINNELL presented on behalf of a candidate the entire scalp, with hair attached, which had been torn by machinery from a young woman aged 28 years While on a visit to an oleo-margarine factory she became interested in a churning machine operated by steam. Immediately behind her head was a rapidly revolving horizontal shaft two and a half inches in diameter. For some reason she drew back her head when her luxuriant and strong hair coming in contact with the shaft, was wound around it with lightning rapidity, jerking, rather than tearing off, in one piece the entire scalp, skin of forehead, and left eyebrow, leaving the cranium denuded to the periosteum, and exposing the temporal muscles, the upper portions of the orbicularis, and the occipital insertion of the complexus and splenius muscles. The scalp whirled with the shaft while the woman fell to the floor grasping her denuded head with her hands black and greasy from contact with the shaft, which she had first seized to save herself. The patient was seen soon after the accident and was apparently suffering very little from shock. In addition to the injuries already described, it was found that the left ear was so torn that it hung to the side of the head by a mere strip of skin. The scalp measured twenty-four inches in circumference, to which was attached the dark-brown hair thirty-two inches long.

At first it was concluded to replace the scalp and trust to ultimate union of the parts, but this idea was abandoned on account of the impossibility of removing the large quantity of blackened grease which smeared the raw surface. Consequently the wound has been left to granulate with a view of skin transplantation in the future.

Dr. Finnell asked what would be the proper time to commence grafting.

DR. ABBE referred to a similar case which occurred four years ago, and in which the same extent of scalp was torn off. In that instance the girl was leaning over a revolving horizontal shaft, when her curls caught, with the result as mentioned. In the course of three months after the accident, granulations extended over the entire scalp, but it was not until a year had elapsed that these granulations were in a condition to receive the grafts. It was found that success attended those efforts only which were made at the cicatricial margins. Any distant remove from the latter always resulted in failure. The pieces of skin were the size of a canary seed, and numbered in all about 12,000. Four years elapsed before the healing process was completed.

DR. PETERS referred to the case of a waiter at one of the large club-houses, who was partially scalped by a falling cornice. The flaps, which were of course attached, were promptly placed in position, a few sutures and a bandage applied, and the parts healed entirely in a few days.

TUMOR OF CHOROID PLEXUS IN A HORSE.

DR. LIAUTARD presented a tumor removed post-mortem from the choroid plexus of a horse aged nine years. The animal had been purchased for business purposes on the 8th of August last. On the day following, the new owner noticed that the animal was ill, and at 3 A.M. of August 10th was apparently unable to rise. Dr. L. endeavored to get the animal upon his feet, but only partially succeeded, as there appeared to be a partial paralysis of the posterior extremities. When helped to stand the animal would fall backwards upon his haunches and roll over to one side. In a very short time he became comatose and died. The autopsy revealed the tumor presented to the Society. Dr. L. remarked that during life the animal exhibited some of the symptoms of the peculiar brain trouble mentioned, so far as difficulty of chewing, stupidity in the stall, and inability to back were concerned. The tumor was, on motion, referred to the Microscopical Committee.

The case had some medico-legal importance, inasmuch as the animal was not (at the time of the sale) technically sound, as represented.

A "CREAKING" SOUND IN PLEURO-PNEUMONIA.

DR. LEWIS SMITH presented the lungs of an infant, who died at the age of five months. It had been bottle-fed until the age of three months, after which it was wet-nursed. About September 10th, a slight cough made its appearance, to which, however, but little attention was paid. There was a slight elevation of temperature, but no increased acceleration of respiratory movements. On the 14th there began to be a considerable amount of dyspnœa, some fever, and rapid pulse, but there was no dulness on percussion. On the 15th there was a marked respiratory moan, dyspnœa, and a prolonged respiratory murmur. The diagnosis made was that of pleuro-pneumonia. On the following day the temperature in the rectum was 101° F., while the dulness on the right side was quite pronounced. Dr. S. did not see the patient until midnight of the 15th, when, in addition to the auscultatory signs noted, he discovered a marked and peculiar "creaking" sound on inspiration—a sound resembling precisely that produced by the bending of thick, new leather. Dr. S. thought that there was some doubt as to the exact manner this sound was produced. On the 16th the temperature was 102°, the respiration 44, and pulse, 140, the creaking sound continuing. Death occurred in the course of the day.

At the autopsy there was quite an amount of fibrinous exudation over the posterior part of the right lung, at the point where the "creaking" sound was produced. As usual with young infants under such circumstances, the surface of the opposite lung was the seat of a fibrinous exudation.

DR. ROBINSON thought that practically no real distinction could made between the "creaking" sound spoken of, and a variety of the friction sound, which would naturally be associated with such lesions.

LOCALIZED FIBRINOUS INDURATION OF THE STOMACH.

DR. BLUMENTHAL exhibited the stomach removed from a spare-built man aged sixty-two years. Although suffering from a cough for twenty years, he was never confined to the house in consequence of it, much less to his bed. There was no expectoration with this cough. For the past twelve or fifteen months the cough harassed him very much, and when Dr. B. was called to see him he was under treatment for tubercular disease. Dr. B., after a thorough physical examination, could not agree on such a diagnosis, but, on the contrary, decided the case to be one of chronic broncho-pneumonia. He, however, lost flesh, and his cough was very troublesome. The chest was much con-

tracted. His digestion was fair, and he was a small eater. He had been sent to the South, where, after a sojourn of four months, he came back almost free from cough. At this point in his history he complained of a swelling in the neighborhood of his umbilicus, three inches to the left of the latter and three inches wide, but as he had several small fatty tumors over his body no special attention was paid to the circumstance. More particular attention was paid to the growth afterwards, and a consultation was held with a view of determining its true character. It was accordingly seen by another medical gentleman, who made the diagnosis of cancer of the pancreas. Dr. B. did not agree in the opinion, as the patient had none of the constitutional symptoms which belonged to so grave a disease. Within a few months afterwards, the patient was troubled with acid eructations, and occasionally with vomiting. Finally a diarrhœa occurred which rapidly prostrated him, and death occurred during the earlier part of September.

The autopsy was made rather surreptitiously, and was consequently not very satisfactory. On examining the site of the abdominal tumor, no tumor was found. Passing up the hand through a section in the abdominal walls, the pyloric extremity of the stomach, much enlarged, presented itself. On trying to bring this enlargement into view the stomach ruptured. The stomach, part of the pylorus, and part of the transverse colon were removed. The pancreas was found to be of normal size, and a portion of the organ was found attached to the right extremity of the stomach. The contraction, induration, and thickening of the pylorus was the cause of the tumor felt during life, the weight of the tumor causing its dislocation to the situation already noted. The induration was strictly confined to the pylorus. The question arose, in view of the fact that nothing but fibrous tissue was discovered, whether the specimen was really cancerous in character. Dr. Jacobi had hastily examined a portion, and decided that the disease was probably simple fibrinous degeneration.

After some remarks from several members concerning the rarity of such an affection, the specimen was referred to the Microscopical Committee.

Dr. Peters remarked that among the first specimens presented to the Society in 1844 was one of fibrous degeneration of the stomach exhibited by himself. He believed that Dr. Loomis had also presented a similar specimen. In reference to Dr. Blumenthal's case, he expressed his surprise that with such a small pylorus there should not have been more vomiting, or a greater distention of the stomach. He mentioned a case in point in which there was constriction of the pylorus with the usual symptom of vomiting. All of a sudden the latter symptom ceased and the patient complained of great distress from distention and from an inability to turn over. Finally, at the end of four or five days, an enormous quantity of accumulated food was vomited.

Dr. Finnell remarked that general fibrous degeneration of the stomach was very common, but he always associated a localized deposit in the neighborhood of the pylorus with malignant disease.

On motion, the specimen was referred to the Committee on Microscopy.

CANCER OF THE RECTUM—EXTIRPATION.

Dr. L. A. Stimson presented two specimens of cancer of the rectum, removed by operation, remarking that they served to illustrate different points in the history of the disease. Both patients were males. The first suffered from obstruction of the rectum for six months, during which time the disease causing it had made very rapid progress. A tumor was found just within the anus, extending upwards four inches, involving almost the entire periphery, and for the most part situated on the front portion of the gut. The latter circumstance explained a difficulty in separating the growth from the prostate. A similar difficulty was experienced posteriorly in isolating the gut from a mass of firm fibrous tissue up in the concavity of the sacrum. Four inches of the gut were removed. There was subsequently considerable tension at the seat of the sutures, which necessitated their removal. On the return of Dr. Stimson from the country, three weeks after, the wound was suppurating freely. On examination, three small nodules of suspicious induration were discovered in the space between the separated portions of the gut anteriorly.

The second case was one of tumor of the posterior wall of the rectum of two years' standing, of slow growth, and limited to 2½ inches of the posterior surface of the gut. Notwithstanding the period of its growth, there was no infiltration of the underlying tissue. The posterior portion of the gut was only removed, the edges of the sound parts being stitched together in the form of a letter T.

In conclusion, Dr. Stimson expressed the opinion that in cases in which there was much infiltration and rigidity, and much obstruction, the simple removal of the disease was all that was required, the extirpation of the entire cylinder being unnecessary.

THE PHILADELPHIA MEDICAL SOCIETIES.

An Abstract of their September Meetings.

(Prepared for The Medical Record.)

The Obstetrical Society.

The Society was called to order at 8.15 P.M., Thursday, September 5th, Dr. Richard A. Cleemann, the Vice-President, in the chair.

NEW CLAMP SUTURE.

Dr. A. H. Smith exhibited several pairs of steel canulas, to illustrate his "*new clamp suture*," and demonstrated its usefulness in holding together broad, denuded surfaces, as in the operation for laceration of the female perineum. This suture is a modification of one proposed by H. L. Thomas, M.D., of Richmond, Va., in *Hays' Journal* for October, 1877. Dr. Smith also exhibited a "*self-retaining vulvar retractor*," and a lance-headed tenotome; the latter the doctor had used for dissecting off a very thin entire flap in cases requiring denudation of a large vascular surface.

Dr. Wm. Goodell had had such good results from the use of the interrupted wire suture that he did not feel the need of anything better. He would adopt the device of Dr. Smith if future failures to obtain satisfactory union should make him desire a change. He thought the device subject to two objections: first, it would be necessary, if one pair of tubes were used, to use another pair for each deep stitch; second, the canulas were much longer than any wire suture that would ever be used, and they would be liable to cause sinuses, or fistulæ, that would be slow to heal.

Dr. Smith replied that, as the inner ends of the tubes were entirely buried in tissue, no fistula could be produced. The tubes should be removed early—say about three days after their insertion. If this

were done, their tract would heal like that of the wire suture.

Dr. Chas. H. Thomas spoke of a set of three speculæ, which had been introduced into Philadelphia about two years ago by Dr. Higbee, of Springfield, Mass. In common with the instrument exhibited by Dr. Smith, they had short blades, small vulvar with great vaginal expansion, and were self-retaining.

Dr. John Forsyth Meigs read a paper on a case of atalectasis pulmonum, in an infant four weeks old, in which the symptoms simulated those of opium-poisoning. The attack was the result of severe and prolonged crying from intestinal pain. It was very successfully treated by complete rest and position.

ATALECTASIS PRODUCED BY A BATH.

Dr. Savery spoke of a case of atalectasis pulmonum in a child eight days old. It seemed to be the direct consequence of a cold bath. The child became cyanotic, the pulse weak, with some muscular spasm. Death resulted in twelve hours.

Dr. Walker, during an epidemic of measles, had one case in which there was a very slight eruption which retroceded on the next day. A hot bath was given to bring it out again. This was quickly followed by collapse of the lung and death. There had been some bronchial catarrh before the advent of the measles.

Dr. John F. Meigs wished again to call attention to the interesting points of his case, which were, in the first place, the remarkable resemblance of the symptoms to those of opium-poisoning; and in the second place, the cause of the attack, which was the prolonged crying. The long-continued violent use of the muscles of respiration had without doubt fatigued them; the result was muscular spasm of some, complete relaxation of others, and collapse of the lung from its own elasticity.

Dr. A. H. Smith had seen cases of atalectasis pulmonum, the result of sudden shock, but had never thought of the explanation of the condition given by Dr. Meigs.

Dr. Paul F. Mundé, of New York City, presented to the Society a reprint from the *Trans. Amer. Gynæ. Soc.*, vol. ii., of his paper on "The Value of Electrolysis in the Treatment of Ovarian Tumors."

The Society then proceeded to the transaction of its private business.

The Pathological Society.

The Society met on Thursday, September 12th, at 8 P.M., Dr. H. Lenox Hodge, President, in the chair.

NEURALGIC TUMOR OF SKIN.

Dr. H. Lenox Hodge presented a neuralgic tumor of the skin, which had been removed in April last from the forearm of a man forty-eight years of age. Since that time there had been no return of the growth and no pain felt. The tumor was rounded in shape, six-eighths of an inch in diameter at its base, and five-eighths of an inch in height. It was of a bluish color, and extremely sensitive to the touch—the slightest pressure bringing on a fainting-spell. The man first noticed its presence sixteen to seventeen years ago on his forearm, near the olecranon. At that time it was not painful. The pain began seven years ago, and has been on the steady increase ever since. The tumor has been constantly increasing in size, but has contracted no adhesions. It probably originally arose in the connective tissue. In spite of the pain, no connection could be found with any nerve-fibre. The tumor probably pressed on some neighboring fibre.

Dr. Carl Seiler had examined the growth under a microscope, and reported that it presented on section a net-work of well-developed connective tissue, the meshes of which were irregular as to size and shape, and filled with red and white corpuscles. The derm and epiderm covering the growth were atrophied. The structure of the tumor resembled the corpus cavernosum of the penis.

MECHANICAL MICROTOME.

Dr. Carl Seiler exhibited to the members a mechanical microtome of novel construction, designed for the purpose of making large, thin, and even sections of hardened tissues, and said that a mechanical microtome in which the knife was held firmly by parts of the instrument itself had been a desideratum for a long time, and many workers had designed and constructed such contrivances, but all of them had started with the erroneous idea that a slide upon which the knife is fastened, and which runs at an acute angle to the imbedded tissue, would carry the knife through the tissue with a sliding motion, such as is produced by the hand in making a section. That this, however, was not so, but that by means of such a slide the knife acted as a carpenter's plane, pushing through the tissues like a chisel, instead of cutting like a knife. By analyzing the motion of the arms in making thin sections, Dr. Seiler came to the conclusion that if the knife were attached to two arms which were allowed to rotate upon fixed pivots, fastened to the section-cutter, it would pass through the tissue, each point of the cutting edge describing a curve whose radii were the two arms carrying the knife.

That the principle here employed was identical with that upon which the parallel rule was constructed, one blade of which being fixed, the other moves to and fro in the same manner as the knife moved in this case.

After constructing a rough model of the apparatus Dr. Seiler asked his friend, Mr. T. Lentmayer, to construct the instrument for him. In doing so, he, Mr. Lentmayer, had added many improvements in the motion and in the adjustment for different inclinations of the knife, which insured a perfect working of the microtome, even in the hands of unskilled persons. The specimens cut with this machine, which the doctor had brought to show what could be accomplished in the way of large, thin sections, were, viz.: a longitudinal section of the leg of a five months fœtus from the knee downwards, measuring two inches in length and three-quarters of an inch in width at the widest part; a section of an epithelioma from the cheek, one and a half inches long by three-quarters of an inch in width; and a longitudinal section through the upper and lower maxilla of a five months fœtus, taking in the turbinated bone, and measuring one and a half by one and a quarter inches.

That it was needless to point out the great advantage of large sections, especially of pathological tissues, and that there was no doubt that when the instrument came into general use there would be more and better microscopical examination of tissues than at present, because many who would gladly work with the microscope were deterred from so doing by the difficulty of making their sections.

The Society then adjourned.

The Society met on Thursday evening, September 26th, Dr. H. Lenox Hodge, President, in the chair.

SIX FATAL CASES OF STRICTURE.

Dr. John H. Brinton presented specimens from six fatal cases of stricture. In four of these cases the treatment had been by gradual dilatation, and in two by internal urethrotomy. All these deaths had occurred in hospital practice. Dr. B. had never lost a case in private practice. From the fifty odd cases of stricture which were tabulated some very interesting statistical conclusions were drawn. In perfect accordance with the views of Sir Henry Thompson, Dr. Brinton had found that two thirds of the entire number of strictures were located in the bulbo-membranous portion of the urethra. The average number of years intervening between the attack of gonorrhœa and the appearance of the stricture was found to be six. In three out of the seven cases where divulsion had been performed there had been well-marked urethral fever. In all of the internal urethrotomy cases—four—there had been urethral fever. So, too, in all of those cases in which external perineal section had been performed, viz., four; but of twenty-two cases of gradual dilatation but eight had suffered from urethral fever.

Dr. S. W. Gross was of the opinion that it was only in hospital practice that death followed the operation for stricture. Hospital patients with diseases of the genito-urinary apparatus were, as a general rule, entirely broken down in constitution before admission; but he had never had a single death from this cause in private practice. From close observation of the cases under his charge he had been able to draw the following interesting conclusions, viz.: That when a stricture was found in the glandular portion of the urethra there were very likely to be more obstructions further back; that protracted gonorrhœa was the most frequent cause of stricture; that divulsion and perineal section were the most fatal of all operations for the relief of stricture; that gradual dilatation was only a palliative measure, whereas strictures could be positively cured by internal urethrotomy.

Dr. Charles W. Hunter had never known a case to be cured by gradual dilatation. He wished to know if urethral fever always followed the passage of urine after an operation.

To this question Dr. Brinton answered that he had known urethral fever to occur both following and also entirely irrespective of the passage of urine.

Dr. H. Lenox Hodge knew of cases where gradual dilatation had been followed by entire recovery.

Dr. Hunter thought that the cicatrix following urethrotomy would tend to contract like the cicatrices of burns.

Dr. Edward O. Shakespeare had examined the structure of a divided stricture microscopically in company with Dr. D. Hayes Agnew, and had found an unusual amount of elastic fibres in the cicatrix, also that in cicatrices of the skin there was little or no elastic tissue.

The Society then proceeded to its private business.

The Philadelphia County Medical Society.

The Society met on Wednesday, Sept. 11th, at eight P.M. The President being unavoidably absent, Dr. J. Solis Cohen occupied the chair.

UTERINE SURGERY.

Dr. W. D. R. Blackwood read a paper on "Who is to Blame?" in which he sought to prove by various cases in his own practice, that gynæcological operations are performed entirely too frequently nowadays, and in very many instances without proper cause. The cases recited to strengthen his assertion were four, in which women had been operated upon for sterility by eminent surgeons of this city and New York, whereas the fault lay entirely with the husbands.

After the reading of the above paper, a set of resolutions, which had been drawn up in commemoration of Dr. W. L. Atlee, were offered, and Dr. S. D. Gross spoke at some length of the deceased.

MOUTH-DISTENDER.

Dr. I. Solis Cohen exhibited several instruments: a "*mouth-distender*," a flexible probe, and an addition to his tracheotomy tube.

The Society then adjourned.

The Society met on Wednesday, Sept. 25th, at eight P.M., the President, Dr. H. H. Smith, in the chair.

PSEUDO-MEMBRANOUS LARYNGITIS.

Dr. Charles B. Vancrede read a paper "On the Course, Pathology, and Treatment of Pseudo-membranous Laryngitis." The paper was mainly directed to the solution of the questions: "Why and when tracheotomy should be performed?" His remarks extended equally to pseudo-membranous laryngitis and diphtheritic croup.

The conclusions drawn were, viz.: 1. That tracheotomy does not in itself appreciably add to the gravity of the case, as is shown by the results of the same operation when done for the removal of foreign bodies. 2. That tracheotomy does not cause the broncho-pneumonia, so often occurring after the operation, but, on the contrary, removes all the mechanical causes which both chiefly produce and, when originated, aggravate this complication. 3. That when all other remedies fail to afford relief, the case progressing from bad to worse, and when nothing beyond the main divisions of the bronchi seem to be involved, it is *our imperative duty* to perform tracheotomy. 4. That even when, from the auscultatory signs, the lungs seem to be involved, if the other symptoms do not indicate an unusually favorable condition, death being clearly imminent from suffocation and not from deficient aeration caused by pseudo-membranous bronchitis, the operation should not be refused, since auscultatory signs have been proven very uncertain *before* tracheotomy. 5. That all these conclusions are propounded with these two provisos, viz., that the operation be skilfully performed, and, *above all*, that the after-treatment be properly conducted; otherwise the operation, instead of affording relief, hastens death.

The Society then adjourned.

W. S. Oliver, M.D., Surgeon-Major, R.A., gives the following process for the diagnosis of *thoracic aneurism*: "Place the patient in the erect position, direct him to close his mouth and elevate his chin to the fullest extent, then grasp the cricoid cartilage between the finger and thumb, and use gentle upward pressure upon it, when, if dilatation or aneurism exist, the pulsation of the aorta [shall] be distinctively felt, transmitted through the trachea to the hand. The act of examination [shall] increase laryngeal distress should this accompany the disease."

Treatment of Aortic Aneurism.—*The British Medical Journal*, Sept. 21st, says that Drs. Proust and Dujardin-Beaumetz have lately reported "six moderately successful" cases of aortic aneurism treated by electrolysis after the manner advocated by Dr. Charles Bastian, of London.

Correspondence.

PARALYSIS OF THE DIAPHRAGM vs. HAY FEVER.

To the Editor of The Medical Record:

Sir:—In The Medical Record of October 12th, Dr. Wm. C. Wey seems to discover "an obscure and rare form of hay fever" in a case reported by me September 20th as one of paralysis of the diaphragm. Even with the light which Dr W. reflects upon the case, I am not prepared to accept his diagnosis.

I am somewhat familiar with hay fever in its varied manifestations, and I fail to discover in the case of Mr. A. any features distinctive of that disease. I may have failed to clearly portray the real condition of my patient and his various symptoms as he actually appeared, and thus unwittingly I may have misled the reader by want of clearness or fulness of description.

We are accustomed to number among the active causes of hay fever the dust of ipecac, mustard, emanations from feathers, the odor of roses, pollen from ambrosia artemisiæfolia and other plants, emanations from hay, etc., and their influence seems to be exerted upon and through the mucous membrane lining the entrances to the air-passages.

In hay fever, hay asthma, June cold, rose cold, catarrhus æstivus, or catarrhus autumnalis, one or more of the following symptoms, I believe, are invariably present at some stage of the disease: great sensitiveness of the nasal mucous membrane, persistent sternutation, coryza, bronchitis, asthma, naso-pharyngeal catarrh, marked suffusion of the eyes, photophobia, and usually tumefaction of the lids. In the case that I reported, at no time, during nor about the period of the attack, was one of these symptoms present. It seems to me that such a case of *hay fever* is like "Hamlet" with the Prince of Denmark left out.

It is noticeable that Dr. Wey's case of a supposed similar type was attended with catarrhal symptoms, even in the season when from a sudden and severe onset, or the prompt and efficient treatment, it was wholly abated. If also it be true, as stated by some very good authorities, that hay fever occurs rarely, if at all, at the South, the fact that Mr. A.'s first attack occurred while a resident of one of the Southern States is a presumption against the diagnosis suggested by Dr. Wey.

Lastly, I know of no form of hay fever that so affects the respiratory system that upon *inspiration* the epigastric and hypochondriac regions are depressed or contracted, the converse taking place during expiration. These symptoms in themselves alone are almost certainly diagnostic of paralysis of the diaphragm.

Benj. Edson, M.D.

Brooklyn, Oct. 14, 1878.

THE LOWER FUNGI AND INFECTIOUS DISEASES.

To the Editor of The Medical Record.

Dear Sir:—Possibly some of your readers may not have met with C. von Naegeli's recent work on the lower fungi in their relations to infectious diseases and hygiene, for a careful analysis of which we are indebted to the *Neue Freie Presse*.* Such as have not will, I am sure, be glad to see a brief summary of the views of so prominent an authority, especially as they are in many respects so directly opposed to those now generally received.

To begin with, he declares that volatile matters (gases), and likewise inorganic chemical compounds, cannot be active as agents of infection; for in the one case their rapid diffusibility would very soon render them inoperative, and in the other the exceeding smallness of the doses, millions of times less than those of the most active poisons, would not be sufficient for infection. The lower organisms of the class of fungi must be indicated as the agents in the causation and diffusion of various infectious diseases, such as malarial fever, cholera, typhoid, diphtheria, smallpox, etc., and these under the highest powers of the microscope appear merely as granules or rods without further structure, and their weight is estimated at the thirty thousand millionth part of a milligramme. In spite of their infinitesimal size, however, it would be a fatal error to deny them the properties of solid bodies, or to forget the simple physical laws, according to which gases, owing to the mutual repulsion of their molecules, tend to diffusion, while even the smallest solid bodies seek the substratum, and can be only mechanically dislodged.

Now these fungi require certain conditions to keep them alive and in good health; among the most important is water, and water which does not contain more than a certain small percentage of foreign matter. If these conditions are wanting, their activity is lost for the time, but can be revived again, after an indefinite period, under favorable surroundings. A temperature of 104° F. suits them best; they may be frozen without destroying them, but a boiling heat kills them.

Naegeli makes three principal classes of infectious diseases, viz.: the contagious, the miasmatic, and the septic, and maintains that these are not due to as many different varieties of fungi, as is generally taught, but to different manifestations of activity in like fungi under varying conditions of location and nutrition. The fungus of contagion must be introduced into the healthy body either by immediate contact, or through the agency of water or air. The skin offers insuperable obstacles to its entrance, and we are thrown back upon the air-passages and the alimentary canal. Doubtless, he says, we take into our stomachs immense quantities of fungi in certain articles of food; but their harmlessness needs no further proof than the impunity with which persons in all ranks of life consume gamy meat, Roquefort cheese, and other articles in an advanced stage of decomposition. Then, in regard to water: he maintains that water is wholly innocent of conveying infectious diseases, even when very impure. The impurities consist of the same putridities which we take in food in much larger quantities; and even if miasm-fungi should so enter the system, they lose their infective qualities in the foreign elements and meet with such unfavorable conditions in the alimentary canal that they can do no harm. As examples, he refers to the great districts where infectious diseases are unknown, and where still the inhabitants use exclusively putrid drinking-water. He regards it as an error to suppose that filtering water improves its hygienic qualities; for, while certain tangible impurities are arrested, the invisible, tasteless, odorless miasm-fungi pass through any filter. Turning his attention then to the air, he declares that we possess no test of the presence of miasmata in the air which is appreciable by our senses. A bad smell is no proof of their existence. In fact, we are justified in assuming that air is dangerous only when it comes from localities known to be miasmatic, and when we know that the fungi are in a condition to be

* Die niederen Pilze in ihren Beziehungen zu den Infectionskrankheiten und der Gesundheitspflege. München. R. Oldenbourg, 1877.

taken up and carried away by the air. Hygienically considered, the important conditions for the production of miasm-fungi are present only when strata of earth which have been long wetted by super- or subterranean water are exposed to the air and become dry. As long as it remains wet, the most miasmatic soil cannot infect the air which passes over it, because the fungi cannot escape. The drought following upon the rainy season in the tropics, on the other hand, supplies all the necessary conditions to fill the air with miasmata. Hence the fatality of an atmosphere so filled with these spores, for the lungs furnish a most accessible and extensive surface for their ready absorption into the blood, and then everything is favorable for their rapid and destructive development.

The practical deductions which follow legitimately from the foregoing premises are then as follows: we cannot destroy the fungi, in most cases, because of the difficulties in the way of using the necessary chemicals or high temperature; but we can confine them to the places where they originate and prevent their diffusion. Let the impregnated soil be kept wet, let the excreta of patients with infectious diseases be not allowed to become dry, and let dead bodies be at once wrapped in wet cloths. Various other suggestions as to matters of municipal and domestic hygiene are based upon the same principle of confining and controlling the diffusion of the fungi and their spores by keeping the places where they are known to exist in a state of moisture, whether it be by the ground water under a city, the sprinkling of its streets, or whether the fungi are believed to make their way in currents of air through the walls of our houses when these are thoroughly dry. The same line of argument furnishes our author with a ready explanation of the alleged greater healthfulness of damp dwellings than dry during the prevalence of epidemics; likewise in regard to those Italian cities which are renowned for the health of their inhabitants, while their filth would seem capable of furnishing all possible miasmata.

Imperfect as the above outline of Naegeli's views certainly is, it may suggest new points of inquiry to those specially interested in this subject, none of whom, I imagine, would claim that many questions connected with the pathological relations of fungi are not still *sub judice*.

J. H. EMERSON.

81 MADISON AVENUE, Aug. 14, 1878.

PROFESSIONAL SECRETS AND PROFESSIONAL OBLIGATIONS.

TO THE EDITOR OF THE MEDICAL RECORD.

I FIND such a difference of opinion between medical men as to the responsibility of a physician to his patient in certain circumstances, that I am induced to ask for a brief space in the columns of THE RECORD, to refer to the subject.

It is a question of vital importance, and should be seriously considered by those whose lives are devoted to the cure and *prevention* of disease.

A young man, while under treatment for constitutional syphilis, brought to his physician a lady suffering from some slight temporary ailment. Upon leaving the office he remarked, in effect, "Doctor, I wish you to cure this young lady soon, as we expect to be married shortly." The doctor took occasion, privately, to remonstrate very emphatically with the young man, informing him of the evil consequences which were sure to follow. The reply was, "I cannot help it; the invitations are out, and I cannot withdraw."

The remonstrance was unheeded, the marriage accomplished, and now "the most beautiful young lady" the physician had ever seen is suffering with syphilis in a severe form, the doctor having reason to fear grave, and perhaps fatal, visceral complications. Thus, through ignorance on the part of the lady, criminality on the part of the man, and "*professional obligations*" on the part of the medical adviser, was this work accomplished.

I pass, without comment, the "ignorance" and the "criminality," to dwell briefly upon the "professional obligations." The physician, one of large and long experience, claims that he was not obliged to inform his lady patient of the dangers into which she was ignorantly rushing, but, on the contrary, that his *obligations of secrecy* to his syphilitic patient prevented his going any farther than an earnest remonstrance. This question concerns more than these three individuals; it is as far-reaching as the healing art. Any physician may be called upon in a similar case to decide what course to pursue, and I hold that he should not, *cannot*, shield himself from responsibility behind a false interpretation of medical ethics. He *is responsible*, notwithstanding his asseverations to the contrary, for the terrible results. The unprincipled wretch, it is reasonable to suppose, could not have appreciated the full extent of the misery his act would bring forth, and thus far charity would constrain us to free him from responsibility. Not so with the physician; he fully appreciated and clearly foresaw the dreadful consequences as only an intelligent medical man could, and I submit that it was his imperative duty to have *insisted* upon a postponement of the marriage until it could have been accomplished with safety, or, in case of refusal, *to have warned the unsuspecting victim of the evil results of such union*.

W.

CHLORAMYL AND CHLOROFORM NARCOSIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—The communication in your number of October 5, 1878, from Dr. George E. Sanford, is of decided interest, both as affording a hope that the dangers of chloroform may be diminished, and also as related to one of the most interesting branches of practical medicine. I refer to the simultaneous employment of antagonistic drugs. Those who have read Fothergill's recent work on the Antagonism of Medicines will be impressed with the truth of the author's remark that this counteraction of medicinal agents "promises to be the most potent and withal most precise subject connected with therapeutics."

In a paper read before the Southern Michigan Medical Association, July 18, 1875, by W. N. Smart, M.D., of Hudson, Michigan, he thus refers to an experiment in which chloroform and nitrite of amyl were administered together, and which may be interesting in this connection:

"Gave a half-grown kitten a *mixed vapor* of chloroform and nitrite of amyl, containing about forty-nine parts of the former to one of the latter. I gave this by placing chloroform and amyl, in the above proportion, in a thick cloth sack, which was drawn over the head and held close around the neck, the chloroform and amyl being renewed several times, in order to insure a strong vapor. The effect produced by breathing this vapor for fifteen minutes is a rapid, though deep inspiration; a rapid and rather feeble

action of the heart; an inability to co-ordinate movements; a very slight degree of anæsthesia, and a species of intoxication resembling that produced by alcohol."

How far chloramyl will answer as a safe substitute for chloroform can only be determined by experiment. Since it is estimated that one death occurs in about twenty-five or twenty-seven hundred administrations of chloroform, it is evident that some time must elapse before the comparative merits of any new anæsthetic can be considered as established. For the present it seems to me that humanity and science alike require that when chloroform is used as an anæsthetic, the nitrite of amyl should be at hand as one of the remedies whose efficiency is to be tested in case of impending danger.

F. A. Burrall, M.D.

48 West Seventeenth Street.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 6th to October 12th, 1878.

Whitehead, W. E., Capt. and Asst. Surgeon. Relieved from duty in Dept. of the Missouri, and to report by letter to the Surgeon-General. S. O. 218, A. G. O., Oct. 10, 1878.

Steinmetz, W. R., Capt. and Asst. Surgeon. Relieved from duty in Dept. of the Missouri, and, upon expiration of his present leave of absence, to report by letter to the Surgeon-General. S. O. 218, C. S., A. G. O.

Havard, V., 1st Lieut. and Asst. Surgeon. To report in person to the Commanding General, Dept. of the South, for assignment to duty. S. O. 218, C. S., A. G. O.

Semig, B. G., 1st Lieut. and Asst. Surgeon. Relieved from duty in Mil. Div. of the Pacific, to proceed to New York City, and, on arrival, report by letter to the Surgeon-General. S. O. 217, A. G. O., Oct. 9, 1878.

Cuningham, T. A., 1st Lieut. and Asst. Surgeon. Leave of absence extended one month. S. O. 81, Div. of the Missouri, Oct. 8, 1878.

Medical Items and News.

Contagious Diseases — Weekly Statement.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 12, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Oct. 5, 1878.	0	30	52	0	1	31	0	0
Oct. 12, 1878.	0	25	43	4	0	35	0	0

Office Surgeon-General U. S. Marine Hospital Service, Washington, D. C., Oct. 12, 1878.

National Quarantine Report.—Abstract of Sanitary Reports received during the past week under the National Quarantine Act:

New Orleans, La.—There were 988 cases of yellow fever and 340 deaths during the week ending yesterday afternoon. For the last twenty-four hours, 164 cases and 49 deaths. The disease now prevails throughout the city. Total cases, 11,206; total deaths, 3,400.

Port Eads, La.—One death from yellow fever occurred in the past week.

Baton Rouge, La.—397 cases of yellow fever and 35 deaths for the week ending 9 A.M. yesterday. Total cases, 1,869; deaths, 113.

Morgan City, La.—During the week ending yesterday there were 128 cases of yellow fever and 23 deaths. Total cases, 428; deaths, 71.

Ocean Springs, Miss.—25 new cases of yellow fever and 6 deaths for the week ending at noon yesterday. Total cases, 103; deaths, 28.

Pass Christian, Miss.—For the past week there were 35 cases of yellow fever and 3 deaths. Total cases, 94; deaths, 9.

Bay St. Louis, Miss.—During the past two weeks ending yesterday evening there were 208 cases of yellow fever and 36 deaths. Total cases, 286; deaths, 56.

Biloxi, Miss.—From commencement of outbreak of yellow fever to the 11th inst. there have been 275 cases and 28 deaths.

Port Gibson, Miss.—The yellow fever has spread into the country; at least thirty plantations surrounding Port Gibson are now infected. The deaths to date are estimated at 190.

Friar's Point, Miss.—There have been 13 cases of yellow fever and 4 deaths to yesterday evening.

Crystal Springs, Miss.—Total cases of yellow fever to yesterday evening, 81; deaths, 36. The fever first appeared at Dry Grove neighborhood, twelve miles northwest of Crystal Springs.

Hernando, Miss.—The first case of yellow fever—a refugee from Memphis—occurred August 31st. 28 cases and 10 deaths during the past week. Total cases to yesterday evening, 83; deaths, 33.

Grenada, Miss.—6 cases of yellow fever and 2 deaths for the past week. Corrected total deaths to yesterday evening, 323.

Spring Hill, Grenada Co., Miss.—15 cases of yellow fever and 6 deaths to yesterday. First case Oct. 1st.

Vicksburg, Miss.—For the past week there were 33 deaths from yellow fever. 96 deaths have occurred in Warren County, outside of Vicksburg. Total deaths in city and county, 978.

Holly Springs, Miss.—Total cases of yellow fever to Oct. 8th, 1,064; total deaths to that date, 241.

Jackson, Miss.—Between 30 and 40 cases of yellow fever reported to Oct. 5th.

Memphis, Tenn.—There were 157 deaths from yellow fever for the week ending the evening of the 10th inst. Total deaths, 2,784.

Brownsville, Tenn.—139 cases of yellow fever and 35 deaths for the week ending yesterday afternoon. Total cases, 413; deaths, 121.

Paris, Tenn.—The first case of yellow fever among the inhabitants occurred Sept. 6th. The first case of the fever among refugees Aug. 23d. Total cases to yesterday evening, 52; deaths, 22.

Cairo, Ill.—Total cases of yellow fever to yesterday evening, 31, besides 5 doubtful cases; total deaths, 25. Assistant Surgeon Waldo, of the Marine Hospital Service, taken sick on Thursday, probably with yellow fever.

St. Louis, Mo.—No cases of yellow fever in the city. 3 deaths at quarantine during the past week, two of which were refugees. The superintendent of the quarantine station is sick with yellow fever.

Louisville, Ky.—For the week ending yesterday evening there were 10 new cases of yellow fever and 8

deaths, of which numbers 9 cases and 7 deaths were among the inhabitants residing in the infected portion of the city referred to in previous reports. Total cases, 112; deaths, 49; of these, 88 cases and 34 deaths were refugees.

Cincinnati, Ohio.—No new cases or deaths have occurred since last report up to the 9th inst.

Mobile, Ala.—There were 7 cases of yellow fever and 3 deaths since noon of Oct. 4th to the 11th inst. Total cases, 37; deaths, 20.

Decatur, Ala.—The first case of yellow fever occurred Sept. 7th. Total cases to yesterday evening, 82; total deaths, 15.

Key West, Fla.—Two cases of yellow fever occurred this week, the first since the 21st of September. Total cases, 37; deaths, 16.

Canton, Miss.—From Oct. 4th to Oct. 10th there were 90 new cases of yellow fever and 26 deaths. Total cases to that date, 810; deaths, 139.

Havana, Cuba.—26 deaths from yellow fever and 3 from small-pox, week ending Oct. 5th.

No reports received from the following places, where yellow fever exists: Greenville, Miss.; Mississippi City, Miss.; Water Valley, Miss.; Chattanooga, Tenn.; Grand Junction, Tenn.; Hickman, Ky.; South Pass, La.; Plaquemine, La., etc.

South America.—At Rio de Janeiro there were 3 deaths from yellow fever and 24 from small-pox during the week ending Sept. 19th. Good health prevails in Barrauquilla, New Grenada. Advices Sept. 19th.

Europe.—In 132 cities and towns of the German Empire, having an aggregate population of 7,870,861, there were 3,787 deaths from all causes for the week ending Sept. 23d, being an annual rate of mortality of 26.7 per 1,000 of the population. Among the deaths reported there were 104 from scarlet fever, 1 from typhus, 104 from diphtheria and croup, and none from small-pox. At Vienna, Austria, during the week ended Sept. 14th, there were 12 deaths from small-pox, 2 from typhus, 3 from scarlet fever, and 12 from diphtheria.

Africa.—A dispatch from the U. S. Consulate at Gibraltar, Sept. 23d, states that private advices from Tangier announce 103 deaths from cholera at Casablanca, Morocco, on the 17th of Sept., Moors, Jews, and Christians being attacked by the disease. At Fez the cholera is reported as increasing. Cholera has broken out in several other places in the interior of Morocco. At Mogadore, Morocco, the deaths from hunger and typhus are reported to be from 60 to 70 per day. The hungry Moors attacked the custom house and British and Spanish consulates at that place, and were repulsed with loss.

Asia.—31 deaths from cholera in Bombay, week ending Aug. 20th. No deaths from cholera in Calcutta for week ending Aug. 10th.—JNO. M. WOODWORTH, *Surgeon-General United States Marine Hospital Service.*

TO PHYSICIANS AND OTHERS RESIDING IN THE CITIES AND TOWNS VISITED BY THE YELLOW FEVER.—Dr. Woodworth has also issued the following circular, under date of Oct. 10th:

Acting upon the advice of members of the American Public Health Association, the Surgeon-General of the Marine Hospital Service has organized a Commission to gather and record all important *facts* relating to the commencement and spread of the present epidemic of yellow fever, with the view of establishing truths upon which the theory and practice of prevention of future epidemics may rest.

The gentlemen composing the Commission—Prof. Bemiss, of New Orleans, Dr. Cochran, of Mobile, and Prof. Howard, of Baltimore—have already commenced their work in New Orleans, and will visit the principal places in which the yellow fever has prevailed.

The cordial co-operation of all who have facts to communicate, bearing upon the subject under investigation, is earnestly solicited for the Commission.

A preliminary report of the facts, gathered up to the 19th day of November next, will be presented to the American Public Health Association, which will convene on that day in the city of Richmond to discuss the report, and to advise the best course to be pursued in concluding the labors of the Commission.

It is not intended to terminate the investigation on the 19th of November, but it is desirable that those interested in public hygiene, in all parts of our country, should meet in council prior to the assembling of Congress, as it is generally believed that legislative action will be promptly taken in reference to preventing future epidemics. The agitation of the public mind upon this important subject is proper and commendable, but herein lies the peril of hasty or not fully-matured legislation, and it is hoped that by the action proposed Congress may have the benefit of the advice of the representative men of sanitary science.

The invitation of the officers and executive committee of the American Public Health Association, extended for the Richmond meeting, is to "medical and sanitary authorities and other citizens who seek to promote the public health." This will afford an opportunity for all who desire to advise in reference to the work in hand.

If the voluntary contributions of money for the expenses of the Commission are sufficient, it is intended to add to the Commission a Sanitary Engineer, a Microscopist, and a Meteorologist.

The first step in the investigation is, as already stated, an examination into the causes of the commencement and spread of the epidemic, now being prosecuted by the Commission.

The second step is the study of the natural history of the disease itself, which will be undertaken if the contributions of money warrant.

It is believed that the study of the treatment of the disease should not be added to the labors of the Commission. The contributions of experience in this direction will doubtless be numerous, and may be properly left to the medical journals of the country and to individual reports.

DISEASES OF THE SKIN.—Dr. Bulkley is giving a course of lectures on diseases of the skin in the Pathological Amphitheatre of the New York Hospital, 7 West Fifteenth Street, Wednesday afternoons from 2.30 to 3.30 o'clock. The course will consist of twenty-four lectures, and will be free to students and medical practitioners.

THE ROLL OF HONOR.—Additional deaths of medical men from yellow fever have occurred since our last report:

Memphis, Tenn.—Oct. 8th, Dr. O. D. Bartholomew, volunteer from Nashville, Tenn.; Oct. 10th. Dr. B. R. Montgomery, volunteer from Chattanooga, Tenn.; Oct. 13th, Dr. J. R. Force, volunteer from Hot Springs, Ark.

Vicksburg, Miss.—Oct. 11th, Dr. Happoldt, volunteer from Morgantown, N. C.

Port Gibson, Miss.—Oct. 9th, Dr. Thomas Young.

Greenville, Miss.—Oct. 5th, Dr. J. S. McCall, Dr. A. S. Gardine, Dr. William Montgomery.

Brownsville, Tenn.—Oct. 8th, Dr. John J. Ware, President of the Board of Health.

Chattanooga, Tenn.—Oct. 13th, Dr. E. M. Baird, Dr. R. N. Barr.

Previously reported, 86. Total to date, 92.

Original Lectures.

THE LOCAL TREATMENT OF ECZEMA.*

By HENRY G. PIFFARD, M.D.,

PROFESSOR OF DERMATOLOGY, UNIVERSITY OF THE CITY OF NEW YORK, SURGEON TO THE CHARITY HOSPITAL, ETC., ETC.

Eczema is the most frequent, one of the most obstinate, and certainly the most important of all the cutaneous affections. Its successful management requires a judicious combination of internal and external treatment, with, in addition, proper hygienic attention. Of these the hygienic is the simplest in its applications, insomuch as a clear conception of the nature of the disease immediately suggests the proper rules of diet, exercise, and the like. The internal treatment—that is, the use of drugs, is the most important, but, at the same time, the most intricate portion of the treatment, and will be considered in its details on another occasion. The local treatment stands midway in importance between the internal and hygienic, and midway also as regards simplicity.

The rôle of local treatment is somewhat limited, but if we desire to do our best for the patient, its proper application should not be neglected. In a few cases local treatment alone will succeed in dissipating the lesion, but will not prevent or retard a relapse; in many cases it will materially assist the internal treatment in abridging the duration of the manifestations of the disease, and in a certain number it will modify the subjective phenomena.

Eczema presents many phases varying with the stage, character of the primitive lesion, degree of inflammatory action, individual peculiarity of the patient, complicating circumstances, etc.; but in all of these cases the indications for treatment are so clear that, once rightly appreciated, many of the apparent difficulties disappear.

In no affection with which we are familiar is it so important that the idea of a routine treatment based upon nosology should be abandoned. As regards the internal treatment, it is the *patient*, with all his functional or organic derangements, that demands consideration; in the local treatment it is the cutaneous *lesion* that must be studied and cared for. We must in both cases remember that the conditions actually present in one patient are seldom exactly duplicated in another, and, consequently, that treatment which is best for the first may not, and probably will not, be best for the second. In other words, we must individualize the cases in the strictest manner.

As the present article concerns the lesion only, we will make a brief allusion to the conditions most frequently present, and indicate the principles of treatment that find their application under the varying circumstances of the case.

Every outbreak of eczema commences with a prodromal period of local cutaneous congestion, characterized by heat, redness, slight or almost imperceptible swelling, and certain subjective sensations, which attract attention to the parts. From the appearances alone it will be often difficult to decide what form of cutaneous disease is impending, just as during the first day of an active febrile movement we may be unable to predict the character of the disease that will be developed on the morrow.

This period of congestion is rarely presented to the eye of the physician, except when it occurs in patients who are already suffering from more advanced eczematous lesions in other parts of the body, and who have already come under treatment for them.

Under these circumstances we have known the application of solid nitrate of silver to cause a disappearance of congestions that we supposed would have otherwise developed into frank eczemas.

This prodromal congestion, if uninterfered with, usually eventuates in some one of the so-called special primary lesions of the disease. These are six in number. In the first place, the active congestion may give place to a passive one of indefinite duration, characterized by redness, and often a trace of fine desquamation with possibly a little occasional moisture, alternating with the more usual dryness. These cases were formerly classed as chronic erythemata, but a closer study has convinced most dermatologists that they are essentially eczemata. Little attention has been paid to this form in the text-books, but an admirable delineation of the affection will be found in Dr. Duhring's Atlas. The congestion is usually accompanied with a moderate amount of subjective heat, or itching. This form of eczema is more frequent on the face than elsewhere. The most effective treatment for this variety is internal, but still a great deal of assistance is afforded by external means employed in conjunction with the latter. The indications are to reduce the congestion, and to relieve the itching. To accomplish the former the ordinary well-known astringents may be employed. In addition, we have derived benefit from the application of a solution of bromide of potassium in rose-water and glycerine, varying in strength from ten to twenty grains to the ounce. Fluid extract of ergot, rubbed up with cold cream, and a similar preparation of arnica root are also of service. The pruritus, moreover, must be attended to. This ceases with the congestion, but as this latter will not always subside with wished-for rapidity, antipruritics are often advisable. These may be employed separately or combined with the other applications. Besides the well-known antipruritics, hydrocyanic acid, chloroform, etc., the mixture in equal parts of chloral hydrate and camphor, introduced by McCall Anderson, is worthy of special mention. This mixture, in the proportion of ten to twenty grains to the ounce of ointment, will sometimes greatly palliate the itching.

In the majority of cases, however, instead of the simple chronic congestion, we find a development of certain special lesions, which consist in either vesicles, pustules, papules, fissures, or an exfoliation of the horny layer of the epidermis, or there may be a mixture of two or more of them. This condition is usually termed the first stage, and as regards the vesicles and pustules, lasts for a day or two only. It rarely comes under notice, and requires little in the way of treatment other than the application of cooling lotions, or better, either the black or yellow wash (mercury and lime-water). To the first stage succeeds the second, characterized by exudation and crusts, specially marked in the vesicular, pustular, and exfoliative varieties, less so in the others. The accumulation of secretion and crusts in this stage necessitates ablution, but unfortunately the contact with water proves very irritating in many cases, often causing a decided aggravation of the patient's sufferings and a prolongation of the trouble. If, however, we bear in mind the condition present, namely, the skin deprived of its horny epidermis, but with the delicate and succulent cells of rete Malpighii exposed, we can readily understand why the water proves irritating. It is due to endos-

* Read before the Academy of Medicine, Oct. 4, 1878.

mosis, causing tumefaction, and perhaps rupture of the cells. The remedy is equally apparent. It is only necessary to use, instead of water, a fluid whose specific gravity is about the same as the serum of the blood. A mixture that we frequently employ is rose-water, to which has been added a little glycerine and chloride of sodium. This will be found much less irritating than pure water.

The crusts being removed, the cleansed parts are in a condition to benefit by some medicinal application, usually in the form of ointment. Of these, the oxide of zinc, when nicely made, is perhaps the best when a protective application alone is needed. It is probably not to any great extent curative, its chief office being to shield the parts from friction and atmospheric influences. The tincture of benzoin which it contains, however, probably exerts a soothing influence. The most effectively curative ointments in this stage and condition of eczema, are those containing some preparation of mercury: the ammoniated mercury, the nitrate, and the black oxide. The two first may be employed in ointments of officinal strength, or somewhat diluted, the third in the proportion of ten grains to the ounce. Lead comes next to mercury in usefulness, and is usually employed in the form of *ungt. diachyli.* This, to be of service, must be carefully made, and quite fresh, as it easily becomes rancid and irritating. The "glycerole of the subacetate of lead" (Squire's formula) is not open to this objection. These ointments must be used with caution if the affected surface is extensive, as we have known both mercurial and plumbic symptoms to arise in consequence of their too free employment.

The pruritus, which is usually present and sometimes severe, invites attention. Unfortunately, it is very difficult to relieve. The chloral mixture above referred to should not be applied to a surface deprived of its epithelium, in consequence of the pain it produces, and chloroform should not be used in connection with the lead or mercurial ointments, as it greatly promotes the absorption of these metals. It may, however, be used with the zinc. The ointment containing it must, of course, be kept closely stopped to prevent its evaporation. Decided relief to the itching is sometimes obtained by adding to any of the ointments mentioned a little tincture of Hamamelis Virginica. The best preparation is made from the fresh plant. The various "extracts," "double extracts," "red extracts," fluid extracts, etc., in the market represent but a portion only of the virtues of this plant. Country physicians would do well to make their own tincture of hamamelis, using the bark of the smaller limbs or twigs, and macerating it for a few weeks in sufficient 80 per cent. alcohol to cover it. By this means they can obtain a good tincture very much cheaper than a reliable article can be had in the market. Hamamelis is a drug too highly estimated by the public, but too much neglected by the profession. Stramonium and conium are also useful antipruritics. The white precipitate or black oxide may be added to the *ungt. stramonii*, or tinct. stramonium may be added to the ungt. hydrarg. nit. In spite of these the itching will often prove obstinate, and disappear only on the cure of the eruption itself.

When an acute eczema has passed through the period of exudation and crusting, and enters the third stage, characterized by redness, dryness, and scaling, the changed condition will demand a change of treatment. Here the mercury, zinc, lead, etc., are of comparatively little service, and should be replaced by some preparation of tar. Of these the most important are the *ol. picis, ol. rusci*, and *ol. cadini.* The last, when genuine (which is seldom the case), is the best. The tar is mixed with simple ointment in the proportion of one or two drachms to the ounce. A useful preparation belonging to the same category is the "*olio di maiz guasto*," much used in Italy. It is prepared from corn.

Thus far we have spoken of acute eczema only, and more particularly of the vesicular, pustular, and exfoliative forms.

In the fissured form, especially on the palms of the hands and behind the ears, we have found plumbago (the best for this purpose is known as "photographic graphite") in ointment (1–10), or mixed with lycopodium or some other inert powder, exceedingly valuable.

When an eczema becomes chronic, it does so either from sheer indolence or in consequence of excessive infiltration. If the indolence is marked by decided venous stasis, dark bluish red color, etc., the hamamelis before mentioned will be found specifically useful; if, however, this feature is not present, or the color of the patch is rather paler than is usual in eczema, the ham. V. will not be of much, if any use. Under these circumstances we need stimulating, *i. e.*, irritating applications. The basis of these may be hydrarg. biniod., hyd. bichlor., potass. iod., iodine, cantharides, croton oil, and many others that will immediately suggest themselves. The first three may be prescribed in ointment, the last three should be applied by the physician—the iodine in tincture and the cantharides in collodion. The croton oil is very conveniently used in the form of solid cylindrical sticks, made by melting together equal parts of croton oil and white wax, and pouring the mixture into paper molds. A single application of either of these irritants is often sufficient to change an indolent patch of eczema into an active one, which then only requires the treatment appropriate to the second stage of ordinary acute eczema to bring about a cure within a reasonable period.

Quite recently we have obtained excellent results by a process that we believe is original—namely, the hypodermic injection of the arseniate of sodium into the eczematous patch. We use solutions of one-fifth per cent., one-half per cent., and one per cent. If there be a single patch of moderate size, a single injection of five to ten minims of the one per cent. or one-half per cent. solution is made. If the patch is larger, or if there are several of them, the weaker solutions are employed, and two or more punctures made in the larger patches or distributed among the smaller ones. The injections are to be repeated at intervals of two or three days, *p. r. n.** As yet we have seen neither abscess nor undue reaction. If the physician will take the precaution to obtain pure arseniate of sodium and distilled water, and make the solution himself, he will be more likely to obtain good results than if he leaves the fabrication of the solution to some apothecary's clerk.

A chronic eczema characterized by excessive infiltration rarely exhibits any tendency to heal until the infiltration has in a measure been dissipated. The lead, zinc, and mercurial ointments will rarely prove of much service in these conditions. The special irri-

* In the first volume of the *Archiv f. Dermatologie*, 1869, Lipp reports the use of hypodermic injections of Fowler's solution and solutions of arsenious acid in psoriasis and chronic eczema. The Fowler's solution is objectionable, as it includes a number of unnecessary ingredients, and the arsenious acid is very insoluble. Lipp only obtained solutions of requisite strength by adding carbonate of potassa or hydrochloric acid.

tant applications just mentioned will do more harm than good, and will probably increase the infiltration. Its removal, however, may frequently be accomplished by the strong alkaline lotions. If *liq. potassæ* or a stronger solution of potash be applied to the infiltrated patch, we will observe, in a few minutes, a more or less copious exudation of clear serum, with, perhaps, a slight temporary increase of swelling. The exudation may continue for some hours, and then gradually diminish. Coincident with the decline of the irritation, the infiltration in part subsides. The application may be renewed at the end of three or four days or a week. The *modus operandi* of the alkaline application is not quite clear. The effects are possibly due to exosmosis, as we have seen the same result follow the application of strong glycerine. Instead of the potash solutions, *sapo viridis*, or ordinary soft-soap, may be used. This should be well rubbed on with a bit of moistened flannel, till the exuding serum has a slight tinge of red; the application to be repeated once or twice a week, if necessary—emollients to be used in the intervals.

We may also attempt the reduction of the infiltration by stimulating the absorptive function of the sanguineous and lymphatic capillaries. The pathological condition present consists in a superabundance of small white cells. Whether these are outwandered leucocytes, or proliferated connective-tissue corpuscles, is a question not yet settled. The present problem is to get them away from the part of the skin in which they have accumulated. Which set of capillaries performs the principal, or perhaps the entire work in this matter, we frankly confess we do not know. Certain it is, however, that "stimulation of the absorbents" may be effected in several ways. The most effective of these is kathodic galvanism. When this is impracticable, we are accustomed to rely upon some of the more active so-called "acro-narcotics" of the indigenous materia medica. Among these hydrastis and its derivatives hold a first rank. Next in usefulness, in our own experience, has been the iris versicolor. This is met with in trade as a tincture made from the fresh plant, as a fluid extract, and as a "concentrated tincture" (Keith's) made from the dried plant. Here, again, the country practitioner has an advantage over his urban brother, insomuch that he can at small expense make for himself a good tincture from either the fresh or the freshly-dried root, as he desires. We prefer to rely upon the fresh tincture, as the virtues of the dried root become impaired by long keeping. (*Vide* U. S. Disp.) If using the iris versicolor, from ʒ ss. to ʒ i. are mixed with simple ointment and rubbed up until the alcohol is evaporated. Another tincture that may be usefully employed in the same manner is that of the viola tricolor. This is not strictly an indigenous plant (being naturalized from Europe). The imported tincture is the one we rely on. That made from the garden plant (cultivated for its flowers) is comparatively worthless. We are not aware that the *v. tricol.* grows wild in any part of this country. The *v. pedata* (*vide* Disp.), however, is found from "New England to Illinois and southward" (Gray). As the active principle of the various violets is believed to be the same, it is possible that the native species, especially the *v. pedata* (*vide* Disp.), may prove as useful as the foreign.*

After the infiltration has been in part or wholly removed by some of the means indicated, the patch of eruption will be in a condition to benefit by the mercurial ointments, etc., followed, if necessary, by tarry applications.

The whole of the foregoing relates to eczemas of the general surface. In certain special locations, however, a few modifications of treatment are desirable. When the affection is located upon the scalp in children, and is extensive, the crusting may be very great, and the parts become the home of numerous pediculi. Under these circumstances, delphine or kerosene will destroy the insects. Poulticing will soften and aid in removing the crusts, and cutting the hair will greatly facilitate recovery.

When eczema attacks the hairy portions of the face, the morbid action is sometimes propagated to the lining membranes of the hair-follicles (outer and inner root-sheaths), constituting one of the affections which commonly pass under the names of mentagra and sycosis. In these cases it is necessary to remove by epilation all the hairs that proceed from the diseased follicles, in order that the remedial application may penetrate them. In fleshy women eczema sometimes succeeds intertrigo of the submammary and genital regions. In these cases dusting powders play an important rôle.

Eczema of the lower extremities, especially of the legs, is not unfrequently complicated with varicosis and very considerable infiltration. In the former of these conditions, hamamelis, and in both of them elastic compression, will prove of great service.

Lastly, indolent and thickened eczemas of the palms and soles are often exceedingly obstinate. The thickened epidermis may be rubbed down with sand-paper or pumice-stone, and the parts enclosed (at night) with some impermeable fabric (rubber gloves, etc.). The cutaneous exhalations thus retained macerate the parts and excite a healthier action.

The successful management of eczematous lesions necessarily demands an exact appreciation of the conditions present, a knowledge of the means by which they may be remedied, and the proper application of these means.

* Of the internal use of the *iris vers.* and *viola tricol.*, in eczema, we have spoken elsewhere (Cutaneous and Venereal Memoranda, N. Y., 1877).

Original Communications.

A CASE OF LATERAL SPINAL PARALYSIS (SPASMODIC SPINAL PARALYSIS OF ERB).

By ALLAN McLANE HAMILTON, M.D.,

VISITING PHYSICIAN TO THE HOSPITAL FOR EPILEPTICS AND PARALYTICS, BLACKWELL'S ISLAND, NEW YORK CITY, ETC.

The reported cases of *primary* disease of the lateral columns of the spinal cord are exceedingly few in number, eighteen being published by Erb,* two of which were evidently of congenital origin, and due to imperfect development of the spinal cord. Five were seen by Charcot,† who remarks, in a clinical lecture, "It is a disease which is not very common. I am not able to collect, from a vast hospital service, more than five cases to report, while it is easy to bring together forty ataxics." Other scattered cases have been reported by various Continental authors, but so far the only American cases have been several described by Dr. E. C. Seguin,‡ in an article entitled "Tetanoid Paraplegia," published several years ago,

* Virchow's Archiv, Bd. 70, H. 3, 5 Juli. 9 Juin, 1877.
† Leçons sur les maladies du syst. nerveux, 4e fasc., 1877, p. 266.
‡ Archives of Scientific and Pract. Med., Feb., 1878.

which were probably of this kind, and two others recently by Dr. L. C. Gray.*

Out of nearly one hundred cases of chronic nervous disease examined by my assistant, Dr. Claddek, and Dr. Dulaney, at the Hospital for Epileptics and Paralytics, but one could be found of primary disease of the lateral columns, and this case is one of extreme interest, from the fact that the central disease has extended slightly into the posterior columns during the past year or two. It is also of interest because the so-called skin reflex is well marked.

John Van Pelt, æt. 28, U. S.; silversmith.

Family history.—Parents alive and healthy. One brother died of "bone trouble," another from some affection of the bowels, and a third from an unknown cause. One sister died who had been subject to epilepsy, and he has another sister who is in poor health. He does not know of any hereditary disease.

Previous history.—Enjoyed good health up to his twelfth year; at this time he fell and injured his back and head, and was afterward confined to his bed for a month in consequence, but subsequently made a complete recovery, and was well until the onset of the *present trouble.* This began eight years ago (1870). He had been in the habit of going to balls and staying up late, but was not intemperate, either in sexual indulgence or drink. He first noticed a feeling of weariness after any slight exertion, when his legs would feel heavy, and his feet sometimes burn. If he persisted in walking his legs would become stiff, and he often stumbled and staggered, and on several occasions fell. He would occasionally suffer from pains during cold weather, and spinal epilepsy. His general health remained unchanged, and he had perfect control over his bowels and bladder. At this time there were occasional formications in his lower extremities, but never anæsthesia. No loss of power or co-ordination in hands, nor any affection whatever of upper extremities. There never has been any pain in the back, affection of the special senses, nor any cerebral trouble whatever; neither were there sharp pains in the lower extremities. For two years he could walk alone, the next two he was obliged to use a cane or crutches. In June, 1875, he was admitted to the hospital, and was then able to move about by clutching chairs or other articles of furniture. He was put to bed, and remained there for a month. About five years ago his feet began to grow stiff, and extended so that he was obliged to walk on their tarsal surfaces, not being able to touch his heels to the ground; about the same time he noticed difficulty in writing and in using his knife and fork, on account of *clumsiness* of the hands. There never has been any constricting band about the waist.

Present condition.—Oct. 14, 1878. Is in good general health; appetite good; complexion clear, and lips bright red. He usually sits in an arm chair, very much bowed over, the head quite in advance of the body, but he is able to move it freely. The abdominal fold, so well described by Charcot,† is conspicuous. The belly is prominent, and at the lower border of the ribs is a fissure which extends across the body. The patient cannot straighten himself, though there is no vertebral disease, the spinal column being in no way affected. The thighs and legs are rigidly extended and adducted, and the feet are also stiffly extended. The arms are not involved. When told to raise his heels from the floor when sitting he is unable to do so for more than six inches, and the rigidity which follows prevents them from falling to the ground immediately, as the muscles upon the anterior aspect of the limbs seem to contract. The feet are somewhat inverted, and by using some force passive motion is possible; but he cannot move them himself, neither can he abduct them nor cross his legs. The muscular rigidity seems to be greatest in the supine posture, and he complains that it is especially troublesome in the night. The joints are well developed, but there is no arthropathy. He cannot now stand nor raise himself from his chair, but when assisted and held on his crutches the characteristic appearance of the lower extremities is well shown. He then stands upon the metatarso-phalangeal part of the foot, and in attempting to walk he painfully drags his feet, and with difficulty forces one ahead of the other, when, by action of the adductors, they become interlocked, and he is obliged to have them disengaged.

In this case reflex excitability is good—that of the tendons quite marked. The act of standing produces quite decided epileptoid movements, and the foot movements (fussphenomenen of Westphal) follow forcible flexion of the feet. Slapping of the muscles of the leg induces fibrillary contractions and movements of the toes. *The tendon reflex varies.* At times a slight tap upon the tendons of the quadriceps or patella will be followed by a vigorous kick. A tap upon the tendinis Achillis will cause the heels to be raised, and the tendon of the triceps when struck will be followed by quite appreciable contractions. A very peculiar feature of the disease is the fact that if the finger be passed ever so lightly over the abdominal parieties, there will follow a general but uneven contraction of the abdominal muscles. Electric irritability of the muscles is fair. There is no conspicuous atrophy—no more than would occur from disuse, and this loss of substance is general. The power in the hands seems to be normal, for with the dynamometer he can force the index to 100°·°· with the right, and 90°·°· with the left. There is slight clumsiness, not amounting to ataxia. The bowels are now slightly constipated, probably owing to his sedentary life; but his micturition is attended by considerable increase in the force of ejaculation.

His cutaneous sensibility is slightly impaired, and there is anæsthesia and analgesia, but no plantar anæsthesia, however. The skin of his legs is sometimes mottled and cold.

Dr. Dulaney examined his eyes very carefully, and found no evidences whatever of any disease at the fundus. The pupils dilated evenly; vision by test types, twenty-twentieths. No ocular muscular trouble whatever, and there never has been diplopia nor strabismus. His tongue is protruded in a straight line, and without tremor. His mental condition is good.

This case, then, presents the prominent symptoms of the disease: paresis, rigidity, and certain irregular spasmodic movements, chiefly of the lower extremities, without ataxic symptoms, atrophy, or cerebral manifestations; and a great increase of the "tendon reflex." It is true that some evidences of impaired sensibility are present, but both Charcot and Erb have shown that these are sometimes found in the third stage, when some involvement of the posterior columns has taken place. Two forms of the disease have been recognized in regard to symptomatology: 1. The form in which the patient progresses with the body thrown back. 2. That in which the patient walks with his body inclined forward. This last form, which Charcot believes to be more rare than the first, is that under which the case of my patient comes. As to the cause of this man's disease, it is possible

* Proceedings of Kings Co. Med. Soc., July, 1878.
† Leçons sur les maladies du syst. nerveux, 4e fasc., p. 287.

that his trade had something to do with its development, as he was obliged to work not only in silver, but in lead as well. In one of Betou's * cases this cause is said to have produced the malady.

BULLET IMPACTED IN MASTOID CELLS,

EXTRACTED BY TREPHINING MASTOID PROCESS, AFTER DETACHING POSTERIOR INSERTION OF PAVILION AND CARTILAGINOUS MEATUS.

By PROF. GEORGE E. POST, M.D.,

BEIRÛT, SYRIA.

——, DAMASCUS, aged 22 years. His little brother discharged a revolver into his right ear while he was sleeping. The ball entered the meatus and disappeared. He describes his sensation as that of one awakened by a clap of thunder. He says that there was copious hemorrhage from the ear, and that he had violent fever, with loss of consciousness and severe headache and impairment of hearing, with distressing tinnitus. After weeks of grave symptoms, which caused his life to be despaired of, he so far recovered as to be able to leave the house, but he was quite unable to resume his avocation as a tailor.

The military surgeons of Damascus twice put him under chloroform, and endeavored to withdraw the ball from the meatus by forceps and the screw tire-balle, but were only able to remove bits of lead which were impacted in the worm of the screw of the latter instrument.

When the patient presented himself to me he was suffering from hemicrania, dizziness, tinnitus, otorrhœa, and an inability to concentrate his attention on any subject. The ball could be felt at the bottom of the meatus, and the screw of the tire-balle drew bits of lead, but the bullet could not be moved in the least by its aid. As there was reason to believe that the ball was spread among the mastoid cells, I resolved on the following plan of operation, which I carried out with the aid of Prof. John Wortabet, of the Syrian Medical College, Dr. R. W. Brigstocke, of Beirût, and Dr. Kidder, Surgeon of United States S.S. Vandalia.

The patient being chloroformed, an incision was made from the superior attachment of the pavilion to the inferior, along its mastoid border, and the pavilion was separated from its deep attachments, and the dissection carried behind the meatus externus until it was quite free from the mastoid process. It was then divided from behind forward, along the line of junction with the bony meatus, and the pavilion, with the cartilaginous portion of the meatus, were turned forward on the cheek, and held there by an assistant.

The posterior bony wall of the meatus was found shattered by the bullet, which was then plainly seen, filling the cavity of the tympanum, and extending by many ragged projections back into the mastoid cells. After repeated vain attempts to dislodge it with forceps and the tire-balle, the mastoid process was cleared of periosteum over a space sufficient to permit the working a five-eighths-inch trephine, and a disk of bone was removed extending from the surface to the site of the impacted bullet. It was necessary, however, to remove several spiculæ of bone in order to dislodge the ball. This was done with a gouge and with a hammer and chisel. The bullet was finally removed entire, with the exception of the bits which had been nipped away by the forceps, or torn away by the tire-balle in the previous efforts.

The patient rallied well from the severe and long-continued operation. The pavilion of the ear reunited by the first intention, save where a tent of horsehair was kept in the wound to favor drainage. Three weeks after the operation he returned to Damascus relieved of all the grave symptoms. He was recommended to dress the wound with the horsehair tent, and syringe it frequently with carbolic acid until it should cease to discharge.

* Étude sur le tabes dorsal spasmodique. Quoted by Erb.

EMPHYSEMA FROM AN INJURY TO THE THORAX, WITHOUT A FRACTURED RIB.

By G. P. H. POMEROY, M.D.,

STUYVESANT-ON-THE-HUDSON, N. Y.

W. M., male, American, farmer, aged 64, was kicked in the right side by a horse, Thursday, August 29th, at about four o'clock P.M. I saw him a few minutes past five. On examination found he had received his injury in the region of the seventh and eighth right ribs, but with the most careful examination could detect no fracture (on the fourth rib, near its costal end, I found an exostosis, but it was not painful, and I could get no history of it). During inspiration there was forced out between the seventh and eighth ribs a small tumor for which I could not account. There was not the slightest abrasion of the skin, but considerable discoloration. Great dyspnœa and pain on breathing were present.

Friday, Aug. 30th, 7.30 A.M., visited patient in company with Dr. Burrall, of New York. Patient had not rested at all through the night. On examination this morning we found the cellular tissue of the right side in an emphysematous condition. There was a slight tendency to cough; pulse was but slightly accelerated; temperature 97° Fahr.; respiration 44. After another thorough examination, we came to the conclusion that there were no fractured ribs, but that some air-vesicles of the right lung had been ruptured by the blow.

Friday, 6.30 P.M.—Emphysema gradually extending over both sides; respiration a little easier and less frequent; pulse and temperature about the same as in the morning. Saturday, Aug. 31st, 7 A.M.—Slight amelioration of symptoms; rested well through the night. 4 P.M.—No material change from morning.

Sunday, Sept. 1st, 1.15 A.M.—Was sent for in great haste. Found the patient suffering from great dyspnœa and a sensation of choking. Pulse 120 and very feeble; respiration very rapid and shallow, with gurgling and a great tendency to cough. The emphysema had extended to back, neck, and face. He was in terrible agony, being unable to lie down for a minute. I gave him diffusible stimulants and used hot applications externally. Between four and five o'clock A.M., he had three thorough evacuations from the bowels (I had previously given him Sal Rochelle), after which he seemed to feel somewhat easier. 9 A.M.—Saw him again with Dr. Burrall. He recommended the continuance of the stimulants, with quinia, and spirits turpentine externally. 7 P.M.—Considerable delirium during the day; symptoms slightly moderated; not quite such a tendency to cough.

Monday, Sept. 2d, 6.30 A.M.—Rested well through the night; was able to lie down part of the time. Effusion somewhat lessened; emphysema greater. Pulse 100; temperature $98\frac{4}{10}$ Fahr.; respiration 32.

5.30 P.M.—Symptoms slightly aggravated, with a great tendency to cough.

Tuesday, Sept. 3d, 6.30 A.M.—Passed a very restless night, with a continuous effort to cough and expectorate; pulse 96; temperature 99-$\frac{6}{10}$; respiration 30. 5.30 P.M.—Slight moderation in circulation and temperature, but quickened respiration, with increased dyspnœa.

Wednesday, Sept. 4th, 7.30 A.M.—Spent a very restless night, notwithstanding the administration of one grain of opium every three hours. Effusion somewhat increased, so much so that he was unable to rest in a recumbent position at all. 6.30 P.M.—Slight aggravation of symptoms from morning, with painful efforts to cough.

Thursday, Sept. 5th, 7.30 A.M.—Rested well through the night, but in an upright position, as he was unable to lie down. There was a slight improvement in the symptoms generally from the previous evening. 7 P.M.—No material change from morning.

Friday, Sept. 6th, 7.30 A.M.—Rested well through the night, and continues to improve.

Wednesday, Sept. 11th.—Saw patient this morning with Dr. Burrall. Patient had rested well through the night, being able for the first time since Sunday, Sept. 1st, to take the recumbent position. Emphysema nearly subsided, and a thorough examination was made, having patient move his arms backward and forward, and put his hand on the top of his head, which he could do with the hand on the injured side, as well as the other. We also pressed on the extremities of the ribs, and it caused him no pain, all of which tests seem to indicate clearly that there has been no fracture. Have seen the patient a number of times during the subsequent weeks, and he has almost fully recovered, complaining only of weakness and some pain at the site of injury on too much exercise.

My opinion is that the injury was received during inspiration, while the lungs were filled with air. That the emphysema was due to a rupture of air-cells caused by a tearing off of the pulmonary pleura and the concussion necessary to the blow.

The tumor referred to I believe was pleural, and that it was caused by the calk on the horse's shoe, which struck at that point between the seventh and eighth ribs.

Reports of Hospitals.

ROOSEVELT HOSPITAL, NEW YORK.

SERVICE OF WM. H. THOMSON, M.D.

CARDIAC DILATATION AND HYPERTROPHY—AORTIC AND MITRAL STENOSIS—CHRONIC PACHYMENINGITIS—ALBUMINURIA AND SYMPTOMS OF URÆMIC POISONING RESULTING FROM DISEASE OF THE HEART.

SARAH F., æt. 50, widow; admitted May 2, 1878. This was an old cardiac case, which had been in the hospital previously. A few days after leaving the house the patient became very œdematous in feet, legs, and face, and soon fell into a semi-comatose condition. Later this changed into entire coma, and then alternated with delirium. She continued in this state for nearly three weeks, and in the meanwhile passed a large amount of urine. At the end of that time there was a marked improvement; she gained strength rapidly, and was soon able to walk about. Just before her second admission her feet and face again became œdematous, and she suffered from severe headache, impaired vision, and frequent attacks of nausea. When she was brought to the hospital her friends stated that her mental faculties seemed to have been somewhat impaired for some time.

A physical examination showed that the heart was irregular in its action; its sounds very feeble, and an initial systolic murmur was heard. Fluid was detected in the right pleura, as high as the angle of the scapula, and above that level there was a friction-sound. The urine was acid in reaction, of a specific gravity of 1029, and contained twenty per cent. of albumen. The treatment she was put upon consisted of stimulus, and a mixture containing digitalis and acetate of potassium, with half a drachm of fluid extract of pilocarpus at night. Under this the œdema of the feet became slightly diminished, but the quantity of urine passed was small. On May 5th she suffered a great deal from dyspnœa, and vomited frequently. The bowels were constipated, there was suppression of urine, and the patient was very stupid. She was ordered a teaspoonful of fluid extract of pilocarpus, and a pill containing two drops of croton oil, but neither of them acted. In the evening she became semi-comatose, and was ordered to be placed in the hot-air bath for five hours, and to have enemata of whiskey, milk, and fluid extract of pilocarpus. All of these, however, were rejected. The next day the patient was comatose, and the dyspnœa was very marked. The surface of her body was thoroughly oiled, and then she was wrapped in blankets saturated with hot water. She was then ordered a hypodermic injection of one-tenth of a grain of pilocarpin, and to take by the mouth fifteen grains of calomel with ten grains of jalap; the dose to be repeated if necessary. Although she was vomiting constantly, she retained the powder on her stomach, but no cathartic effect was produced. Moderate diaphoresis, however, occurred, and hypodermic injections of pilocarpin were repeated, at intervals of three-quarters of an hour, until half a grain had been given. By this time very profuse diaphoresis was produced. In addition, elaterin was administered hypodermically as follows: one-twentieth grain at two P.M., one-twentieth grain at three P.M., one-tenth grain at four P.M, and one-fifth grain at six P.M.; and in consequence the bowels began to move freely at nine P.M., and continued to do so through the night. She also passed a fair amount of urine. On the following day the patient was found to be much improved and entirely rational, while the œdema was considerably reduced.

On May 10th she complained of slight headache and occasional vomitings, and was put upon soda-powders and Vichy, and, by way of diet, milk and lime-water in equal parts. This regimen was followed by very satisfactory results. On the 12th, however, she had a return of dyspnœa, seemed very stupid, and vomited frequently. She was ordered two powders of calomel and jalap, similar to those given before, at an interval of three hours; but they failed to produce any effect upon the bowels. Thirty grains of *pulvis purgans* was then directed to be given every three hours until the bowels moved, and a slight evacuation was produced after the third powder had been taken. Two hours later two pills, each containing two drops of croton oil, caused a very free movement. Her condition afterwards improved again, the treatment consisting, for the most part, of jaborandi, Vichy, and whiskey; but on the 17th of May it was noticed that a bed-sore was forming on the sacrum, and the patient was ordered to be removed to a water-bed. The bed-sore was dressed at first with oxide of zinc, and afterwards tannate of lead ointment, but nevertheless it continued to spread rapidly, and on the 28th fre-

quent washing with a solution of bromine (an ounce to the pint of water) was commenced. The bowels and kidneys continued to act freely, but the patient suffered a great deal from dyspnœa, and it was evident that her strength was fast failing. She became comatose at three o'clock on the morning of the 29th, and died in profound coma at seven that evening.

Autopsy: *Brain.*—Thin hemorrhagic layer on inner surface of dura mater. Increase of clear serum under the pia mater, which looks very finely granular. Convolutions rather loose and somewhat atrophied.

Heart.—Both ventricles dilated, and wall of left ventricle thinned. Mitral stenosis and insufficiency. Fringe of vegetation on aortic valves. Pericardium coated with a thin layer of fibrin, and turbid serum in its cavity.

Lungs.—Well-marked pigment induration. Considerable serum in both pleuræ.

Liver.—Small and firm; "nutmeg" in character.

Stomach and Small Intestines.—General congestion of mucous coat.

Kidneys.—Of medium size and normal consistence. Capsule not altered. Surface smooth. Very little gross appearance of disease presented.

The large amount of albumen in the urine, and the uræmic symptoms in this case, seem to have been due alone to the cardiac trouble.

DOUBLE MITRAL AND AORTIC REGURGITANT MURMURS —MARKED RELIEF FROM SYMPTOMS.

The great improvement which is so frequently seen in cardiac cases, as a result of the change of manner of life and the care and attention incidental to a residence in a well-regulated hospital, is well shown in the following case:

Catherine C., æt 14; was admitted May 29, 1878. Previous history: Mother died of phthisis. Had acute rheumatism one year before, involving ankles, knees, and shoulders. After that attack the patient felt perfectly well up to three weeks before admission, when she began to suffer from an aching pain in the præcordial region, and was greatly troubled with palpitation of the heart. She also became subject to dyspnœa on exertion, and later she had a slight cough, with frothy expectoration. Her appetite failed, and she became subject to night-sweats.

On a physical examination it was found that the cardiac impulse was in a vertical line from the centre of the axillary space. The area of cardiac dulness was remarkably low down, only commencing at the fourth rib, and the apex-beat was in the sixth intercostal space. There was no increase in cardiac dulness on the right side. Double mitral and slight aortic regurgitant murmurs were detected.

The treatment was very simple, consisting only of good hygienic management and the administration of one drachm of infusion of digitalis three times a day, and already on the 1st of June it was noted that the palpitation and dyspnœa had greatly diminished. By the 4th of June the cough and expectoration were also much less troublesome, and on the 10th the patient stated that the palpitation was now caused only by considerable exertion, and that she had no dyspnœa whatever.

ACUTE RHEUMATISM.

The following is quite a favorite prescription:

℞. Sol. acid. salicylic..... f. ʒ ij.
Tinct. gaultheriæ..... f. ʒ i.
Aquæ..... f. ʒ iv.
M.

Dose.—A tablespoonful.

The solution of salicylic acid is of the strength of forty grains to the ounce.

BRONCHO-PNEUMONIA.

Some days before admission, the patient, a seaman, aged twenty-five, after exposure to wet was taken with a chill, followed by fever, which was attended with cough and expectoration. The sputa were not at first blood-stained, but soon became so.

He also suffered from dyspnœa and from pain in the lower part of the right side of the chest. The diagnosis of acute bronchitis with pneumonia of the right lung was made, and the patient put upon milk diet, with an allowance of three ounces of whiskey *per diem*. He was also ordered to make use of the following prescription:

℞. Ammon. carbonat..... gr. lxxx.
Mucilaginis,
Aquæ.....ää f. ʒ j.
Spts. vin. Gallici..... f. ʒ ij.
M.

S.—Tablespoonful three times a day.

This was alternated with an expectorant mixture containing compound syrup of squill, wine of ipecacuanha, and sulphate of morphia, which was to be taken three times a day in the same manner.

The attack reached its height the second day after admission, when the temperature rose as high as 103°, and from that time the patient gradually improved. About twelve days later, there still being considerable dulness over the lower part of the right lung, the patient was ordered twenty grains of muriate of ammonia three times a day, and just one month from his admission he was discharged cured.

PLEURO-PNEUMONIA.

Henry H., a native of Germany, æt. 29; admitted April 29, 1878. For many years he had been subject to slight cough, attended by expectoration, occasional stitchy pain in the right chest, and dyspnœa if he lay upon the right side. Shortly before admission he was taken with a chill, followed by fever, cough, expectoration, pain in right side, and extreme dyspnœa. The sputa became rusty two days later. At the time he entered the hospital the pulse was 104, the respiration 50, and the temperature 103½°; and a physical examination showed dulness, bronchial voice and breathing, increased vocal resonance, with crepitant and subcrepitant râles from the spine of the scapula down, on the right side. There were also a few subcrepitant râles on the left side. The treatment ordered consisted of a milk diet, whiskey, and the first prescription given to the last patient.

On the 2d of May the sputa were green and scanty, with small masses of pure blood scattered through them. The dyspnœa was very marked and the respiration panting in character. At this time crepitant râles were detected over the base of the left lung, behind (where there was also dulness on percussion), and it was naturally supposed that the patient was suffering from double pneumonia. The amount of whiskey was increased to twelve ounces *per diem*, and, in addition, the patient was ordered two drachms of infusion of digitalis every three hours. The dyspnœa, however, continued to increase, and late in the evening he became delirious. At two o'clock the next morning the respiration became extremely rapid, and at 2.30 the patient died.

At the autopsy the right lung was found to be completely covered by a thick layer of recent membrane of fibrine and pus. The lower two-thirds of the

upper lobe and the whole lower lobe were in a state of commencing gray hepatization. The bronchial mucous membrane was deeply congested and inflamed. The pleura of the left lung was covered in places with portions of recent membranes, while the lung itself was quite normal. It will therefore be seen that the plastic exudation about the left pleura in this case gave rise to physical signs closely resembling those of pneumonic consolidation.

CROUPOUS PHARYNGITIS.

The patient, an unmarried female, aged twenty-four years, a few days before admission to the hospital began to suffer from general malaise, and at this time also had a short attack of vertigo. Later she began to vomit, and this symptom frequently recurred afterwards. On retiring she noticed that swallowing caused her distress, and her throat now become very painful. Two days later the glands about the angle of the jaw became enlarged, and in the meanwhile all the symptoms had increased in severity. On the following day she came into the hospital, and on examination it was found that there was great diffused redness about the fauces, and that the tonsils were very much swollen. The treatment she was put upon consisted of a milk diet, four ounces of whiskey *per diem*, and a teaspoonful of solution of bromine (of the strength of one drachm to two ounces of water) three times a day. As a gargle the following was ordered:

℞. Sol. brominii..... f. ʒ ij.
Glycerinæ..... f. ℥ ij.
Aquæ ad..... f. ℥ iv.

The next day, May 30th, the posterior portion of the tonsils and pharynx were covered with a yellowish white membrane. There was considerable dyspnœa, while the patient experienced extreme difficulty in swallowing, and continued to vomit frequently. The pulse was 124, the respiration 40, and the temperature in the axilla, 102⅘°. The same general treatment was continued.

On the following day it was noticed that the expectoration contained a considerable quantity of blood. The membrane still persisted, and the patient's condition was otherwise unchanged. By June 2d, however, the pseudo-membrane had completely disappeared (although the mucous membrane still continued very red and angry-looking), and there was now much less dysphagia and dyspnœa. The pulse had become reduced to 72, the respiration to 36, and the temperature to 99⅘°. On the 5th of June the patient was able to sit up, and complained of only a slight sense of soreness about the throat. No further trouble ensued, and in a few days later she had completely recovered.

CATARRHAL JAUNDICE OF TWO YEARS' STANDING—PROBABLE CIRRHOSIS OF THE LIVER (STAGE OF ENLARGEMENT).

About two years before the date of his admission, the patient, who was thirty-four years of age, and a porter by occupation, began to suffer from malaise, and gradually became jaundiced, the yellow discoloration having continued to a greater or less extent ever since. During the first five months, however, it had not been constant, but had gone away and then reappeared frequently. For eight months previous to admission he had suffered from a constant and distressing itching of the skin in connection with the jaundice. His appetite had generally been poor, and he had vomited a good deal. He had never had any pain or sense of fulness in the right hypochondrium, or suffered from colic of any kind. For the past two years he had been a very hard drinker.

When he came into the hospital he was fairly nourished, and his appetite seemed to be good; he had no aversion to fatty food. The tongue was moist and slightly coated. His bowels were loose, the patient having two or three abundant evacuations of diarrhœal character each day. The stools were almost white in color, and their passage was not attended with any pain. The urine, like the entire skin of the body and the conjunctiva, was deeply discolored with bile-pigment. On making a physical exploration, it was found that both the liver and spleen were larger than normal, the increase in size being much more marked in the latter than in the former. The treatment ordered was half a drachm of the fluid extract of pilocarpus and thirty grains of muriate of ammonia each, three times a day, together with a daily bath of water containing bicarbonate of soda (half a pound to twenty gallons of water).

Ten days later the patient stated that his stools had changed to a yellowish green color. The discoloration of the urine continued. Six days afterwards (May 10th) he perspired profusely after taking the jaborandi, and it was noticed that his clothing was slightly discolored as a result of the sweating. The color of the integument over the extremities was now seen to be clearing up quite perceptibly.

On May 12th, small repeated blisters were ordered over the right hypochondrium, and ten grains of bicarbonate of soda three times a day internally. From this time there was apparently a gradual, but very slow improvement in the icterosed condition of the patient, but no very marked change was noticeable. His appetite continued good, and he gained steadily in strength.

CIRRHOSIS WITH ENLARGEMENT OF THE LIVER.

The patient, aged forty-nine years, stated that he formerly used to drink, but that for seventeen years past he had been temperate. He enjoyed good health up to three months before admission, when he was attacked with a sharp, shooting pain, accompanied with tenderness, in the left hypochondrium, the pain being increased by a full inspiration. He also suffered slightly from dyspnœa, and felt very weak, but had no cough or expectoration. The symptoms lasted about a week at this time, but a fortnight later they returned in an aggravated form, the pain extending rapidly over the epigastrium and right hypochondrium. About a week afterwards he also noticed a tumor in the left hypochondrium, tender upon pressure, which in a fortnight extended beyond the median line and into the right hypochondrium. He continued to suffer in the same way up to the date of admission, May 24th. From the first the pain and dyspnœa were much worse at night, the exacerbation coming on about eight in the evening, and remitting about four in the morning. The pain always became aggravated also from a half-hour to an hour after eating. From the commencement of his illness he was extremely costive, and for ten months previous to admission had lived principally upon fluid diet. His flesh and strength had failed rapidly, but he had never been jaundiced. For four weeks previous his feet had been œdematous. A physical exploration showed that the liver and spleen were both enlarged, and that the surface of the liver was apparently smooth. The urine was acid in reaction, of a specific gravity of 1026, and contained urates in abundance. The treatment ordered was twenty grains of iodide of potassi-

um three times a day, and the half of the following mixture in the morning:

℞. Magnesiæ sulph..... ʒ ss.
Ferri sulph..... gr. viij.
Acid. sulphuric. dil..... f. ʒ j.
Aquæ ad..... f. ʒ iv.
M.

Later, a pill containing one-sixth grain belladonna, one-fourth grain extract of nux vomica, two grains of extract of colocynth, and one grain of Socotrine aloes, was given three times a day, on account of the obstinate constipation. On the 4th of June, the patient complaining of very severe pain in the right hypochondrium, four leeches were applied, with the effect of greatly relieving it. After that the patient continued to improve. The abdomen became somewhat diminished in size: there was less distress after eating; the dyspnœa disappeared to a great extent; his strength improved, and the only complaint that he made was of a sense of weight and fulness over the hypochondriac and epigastric regions.

CEREBRO-SPINAL MENINGITIS.

Walter T——, ten years of age; admitted May 3, 1878. Was well up to April 29th, when he felt indisposed and went to bed. An hour later his parents noticed that he had a high fever, and was unable to move his legs. In the evening he began to vomit, and to complain of pain in the head, back, and all his limbs. There was also tenderness over the surface of the body, and slight opisthotonos was noticed at the same time. The vomiting was projectile in character, and not attended with nausea. Later in the evening he began to complain of increased sensitiveness and of the annoyance of trifling sounds, but did not give evidence of any photophobia until the night before admission. From the first he was delirious every night, and on May 2d he was also delirious through the day, until late in the afternoon, when he had a profuse epistaxis. After this he was much more rational. Two days after he was taken sick an herpetic eruption appeared about the mouth, and sordes upon the teeth. Headache was constant. During the night of the 2d he constantly ground his teeth, and once passed his urine involuntarily. No twitching of the limbs had been observed. The bowels had not been moved since the illness began. There was no history of otorrhœa, or of any injury to the head or spine.

When he was admitted there was marked opisthotonos, but the patient was entirely rational. He was ordered six grains of quinine three times a day, and one-twentieth of a grain of calomel every half-hour. There was no change in his condition, except that he had occasional muttering delirium up to May 5th, when he was ordered a teaspoonful of fluid extract of ergot every three hours. Ten leeches were also applied to the spine, and ice to the head and back.

He was now constantly delirious; but the general hyperæsthesia was diminished. The next day, as the tongue was dry and brown, and the pulse very feeble, he was ordered half an ounce of whiskey every two hours. On May 7th passed fæces and urine involuntarily, and had three moderately loose evacuations of the bowels. On the day following, however, he regained control of the sphincters, and also became perfectly rational. Opisthotonos still continued, but not so marked, and there was now no tenderness along the spine.

On the 13th of May the patient vomited a great deal, and had three severe convulsions. Ice and also a blister were applied to the nape of the neck, and six minims of Magendie's solution of morphia were given, after which there was no return of the convulsions, and he slept well through the night. On the 14th the ergot, which had been discontinued, was resumed, and the nape of the neck was ordered to be rubbed twice a day with biniodide of mercury ointment. During the week following the patient suffered at various times from pain in the back and limbs, and on the 21st he was ordered the following:

℞. Potass. iodid..... gr. xl.
Ext. conii fluid..... gtt. xl.
Aquæ ad..... f. ʒ ij.
M.
S. Two teaspoonfuls three times a day.

On the 29th, the severe pain still frequently recurring, twelve leeches were ordered to be applied to the spine.

On the 2d of June the limbs were flexed and quite stiff, and the effort to move them was attended with great pain. The pain in the back was also more constant, and, in consequence, sixteen leeches were applied to the spine. The next day there was no pain, but the patient was very stupid.

On June 6th strabismus was noticed for the first time, and a small bed-sore was found to be forming on the sacrum. On June 10th the strabismus still continued. Emaciation was extreme, and the patient was obviously losing strength from day to day. Anæmia very marked. By the 16th the strabismus had disappeared, but the patient's condition still continued about the same. From time to time the boy would cry out, apparently from pain, but he was scarcely rational now.

On the 19th severe diarrhœa set in, and chalk-mixture, laudanum and tincture of catechu were given, with the effect of checking it. On the 22d the strabismus returned, and it was noticed that the bed sores were increasing. The patient now had lost control of the bladder and rectum. June 30th, when last seen, he was still in a very low state, and refused to take anything except milk and whiskey.

Progress of Medical Science.

REMOVAL OF A NASO-PHARYNGEAL POLYPUS BY THE TEMPORARY DEPRESSION OF BOTH UPPER JAWS.—Prof. Tiffany, of Maryland, relates a successful case of this novel operation. C. S., a mulatto, entered the hospital with a polypus growing from the base of the skull, occluding the right nostril. The growth was removed by a wire passed around the base, but returned again in four months. It filled the posterior naso-pharyngeal space and was attached to the internal plate of the right pterygoid process, its internal and posterior aspect, and to the adjacent basilar process. As the tumor was large, it was decided to depress the two upper maxillary bones, and to perform a provisional tracheotomy. While the patient was being etherized, when the stage of muscular relaxation came on, the tumor sank down, closing the opening of the trachea. Raising the tumor caused it to bleed, and, asphyxia being imminent, the patient was stood upon his head while the trachea was rapidly opened, liberating an ounce or so of blood. A tube was then inserted, and further interference postponed for the time. Six days later the operation was resumed. To prevent the entrance of blood into the air-passages, a bit

of sponge with a piece of silk attached to it was passed into the opening of the larynx. "An incision was carried down on either side of the nose, at the juncture of the nose and cheek, then around the ala and through the middle line of the upper lip into the mouth. The cheeks were then freely dissected from the upper jaws as high as the nasal bones, infra-orbital foramina, and malar bones. The nose was separated from the upper jaws and turned up towards the forehead. A fine saw was then made to cut each jaw from the malar process into the middle meatus of the nose, passing just beneath the infra-orbital foramen, upward and inward. The posterior wall of the upper jaw, when in contact with the pterygoid process, was not divided, lest the superior palatine artery should be injured. The septum of the nose and the vomer were cut with strong scissors. Both upper jaws were strongly depressed and sank down, hinging upon the pterygoid processes." The tumor was well exposed and the pedicle divided by Paquelin's cautery, and the root of the pterygoid process together with the basilar process thoroughly scraped with the hot curved knife of the same instrument. Bleeding points were touched with the same cautery, and chloride of zinc in crystals was thoroughly applied to the bone from which the tumor grew. The jaws were replaced and held in position by a loop of wire passed through the cheeks near the outer angles of the orbits and joined above the forehead by a rubber band. A celluloid plate was then adapted to the teeth of the upper jaws and grooved, so as to hold the wire securely. The cheek flaps were then united to each other and to the nose by sutures. Finally, the sponge was withdrawn from the larynx. The tumor was between three and four inches long, pear-shaped, and six inches in circumference half an inch from the lower end. The incisions were made as in Cheever's operation, which was fatal after one hundred and twenty hours. Dr. T. calls attention to the advisability of tracheotomy in these cases, and the use of a sponge instead of Trendelenberg's apparatus, which is clumsy and has no advantage over the former.—*Transactions of the Medical and Chirurgical Faculty of the State of Maryland*, 1878.

Treatment of Intermittent Fever by Carbolic Acid.—Dr. Stern treats intermittent fever with a potion containing six minims of carbolic acid in six ounces of distilled water; the dose is a tablespoonful three times a day. He has employed this treatment in twenty cases of malarial fever; in fourteen a single bottle of the mixture was sufficient to produce a cure; four were cured by three bottles, and two proved rebellious to treatment. In six of the cases the fever was quotidian in type; in eleven, tertian, and in two quartan. In the last, no paroxysm took place after the administration of the carbolic acid was begun; in the tertian cases there was as a rule one paroxysm, and in the quotidian two, after the commencement of the treatment.—*Lyon Médical*, July 21st.

Two Cases of Diabetes Mellitus Cured by the Extract of Nux Vomica.—These cases are reported by Dr. Eug. Zarzana, in the *Gazzetta Medica di Roma*. The first patient, a woman, had been passing a large quantity of water for three years; she was very weak, her sight was affected, and her thirst was great. At the time the treatment was begun, she was passing twelve Roman livra of urine in the twenty-four hours; it was not albuminous, but contained a large quantity of glucose. At first she was given daily three-quarters of a grain of the alcoholic extract of nux vomica, dissolved in three ounces of distilled water, and the dose was increased by three-quarters of a grain every three days, until she was taking four and a half grains per diem. Under this treatment the quantity of urine diminished, and it became very acid, flocculent, and colored by biliary pigment. At the same time the glucose diminished until only traces of it could be discovered. The general symptoms improved, and the patient was restored to her previous good health.

The second patient was a large, robust man, seventy-two years of age. During eleven hours he passed two Roman livra and eight ounces of urine, which was rich in urates and albumen. Under the use of the nux vomica, the glucose gradually diminished in quantity and finally disappeared entirely.

Rapid Cure of Two Cases of Enuresis Nocturna by Means of Electricity.—In the text-books on electro-therapeutics the treatment recommended for enuresis nocturna is the passage of the galvanic or faradic current through an electrode insulated nearly to the point, which is introduced into the urethra as far as the neck of the bladder. As this method of applying electricity is very difficult in children, Dr. v. Hesse tried the external application of both currents, but without success. Latterly he has introduced the end of the conducting cord connected with the negative pole one inch into the urethra, placed the positive pole over the sacrum, and passed an induction current between them for two or three minutes; by this method he cured permanently a boy fourteen years of age, in two sittings, and a boy of thirteen, in five sittings.

Dr. Ultzmann, of Vienna, employs for these cases of enuresis a cylindrical metallic staff, one-fifth of an inch in diameter. This is introduced into the rectum, when the patient is a boy, and into the vagina when a girl, and is then connected with one pole of the battery; the other pole is applied over the bladder. He protests against the direct irritation of the neck of the bladder, as it often occasions decomposition of the urine, and thereby gives rise to cystitis.—*Memorabilien*, June.

Treatment of Chronic Pharyngitis.—Discouraged by his lack of success with the usual methods of treatment for chronic pharyngitis, Dr. Foulis has had recourse to cauterization of the pharynx with the red-hot iron, a method that had already been employed in Germany. He heats the iron to a dull red, and applies it successively to each of the thickened points, but not to the entire extent of the pharynx. The pain is slight, and is easily assuaged by fresh butter flavored with lemon-juice. The swelling caused by the application is not great, and twenty-four hours after the operation all unpleasant reminders of it have disappeared. The cauterization should not be repeated oftener than once a week. Dr. Foulis declares that he has obtained excellent results by this method of treatment. It seems to be unnecessarily severe for a malady so insignificant in appearance, but he asserts that the patients regard the cauterization as a mere bagatelle, when compared with the discomforts of the chronic angina.—*Lyon Médical*, July 21st.

The Koroniko Plant.—This plant, which is a species of broom, and is a native of New Zealand, is eulogized as a remedy for diarrhœa, even more certain in its effects than the ordinary astringent mixtures. It is an old and well-known remedy among the Maories and up-country shepherds, especially for intestinal disturbances arising from drinking stagnant swamp-water in dry seasons. The usual method of using it is by making a strong infusion of the young leaves.—*British Med. Journal*.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE NATIONAL HEALTH BUREAU.

The necessity for the creation of a National Health Bureau is so apparent, that it seems to us the way is prepared for the presentation to Congress of a suitable memorial upon the subject. The arguments which can be used in favor of the creation of such a bureau are all in one direction, and, when fairly presented, cannot fail to produce the desired result. The main idea which must be kept in mind, and around which all efforts must revolve, is that of regulating the sanitary interests of a large country according to some effective and authoritative system. On previous occasions we have referred to the utility of such an organization in arresting the spread of yellow fever, and of possibly preventing it altogether in those portions of the country where it was likely to be invited. But this is merely a part of the work. Not only must towns be controlled, but there should exist the authority to command the highways leading from them, and to guard against every possible chance of spreading disease. It is not alone for the purpose of investigating the causes and methods of prevention of yellow fever that such a board should be created, but of studying likewise every other so-called epidemic or contagious disease throughout the country; of protecting the public health by establishing a uniform system of statistics of mortality and of disease; of establishing a standard of qualifications to be possessed by health officers who may be appointed to such positions by the different State authorities; of controlling the drainage and water supplies of large districts of country; of establishing sanitary regulations along railways and river routes; and, in fact, having a jurisdiction over all matters relating to the preservation of life and the prevention of disease.

There is no doubt that these propositions will appeal with striking force to the popular mind in view of the great and widespread interest taken in the epidemic, and that the opportunity has come for the profession, to bestir itself in advocating the utility of a National Sanitary Bureau.

With such ends in view, it is exceedingly important that any appeal to Congress, or any attempt at procuring the necessary legislation for the creation of a national board, should be made with great deliberation, and with the fullest appreciation of the responsibility of the undertaking. We say this much not with any desire of disparaging the efforts of certain gentlemen who have already prepared a memorial upon the subject, but for the purpose of presenting their propositions, and of obtaining any suggestions which may tend to increase the efficiency of a prospective law. The following is the text of the bill to which we refer:

I. That the Board shall be constituted of one medical officer from each of the following named departments, viz.: The Medical Department of the Army, the Medical Department of the Navy and the Marine Hospital Service, and of two physicians from civil life, selected on account of their knowledge in matters pertaining to public health. That the medical officers of the Government services for this Board shall be detailed by the Secretaries of War, of the Navy, and of the Treasury respectively, and that the three officers so designated shall select and recommend to the President for appointment the other two members of the Board.

II. That the Board so constituted shall be known as the United States Public Health Board, and that its duties shall be to obtain information upon all matters affecting the public health, to consult with the Superintendent of the Census with regard to the disease and mortality statistics to be collected and prepared under his direction; to advise the several departments of the Government, the executives of the several States, and the Commissioners of the District of Columbia, on all questions submitted by them, or whenever in the opinion of the Board such advise may tend to the preservation and improvement of the public health.

To establish a standard of the qualifications which should be possessed by a municipal health officer, to examine those who may present themselves for examination as to their fitness for such a position, and to furnish suitable formal certificates to those found to be properly qualified.

III. That the detailed Officers shall receive their usual payment allowances from their respective departments, and that the two physicians selected from civil life shall each receive compensation at the rate of $5,000 per annum, from the funds appropriated for the use of this board.

That the ordinary sessions of the board shall be in Washington, where it shall have its office, and that at least one member of the board shall be always on duty during the usual office hours.

IV. That the board shall prepare and present to

Congress an annual report of its operations, with such recommendations as may seem to it advisable.

V. That when deemed specially desirable by the board, it may send one or more of its members to any point within the United States for the purpose of investigating a disease, or other matter specially affecting the public health,—and that the actual travelling expenses of the members so sent shall be paid from the funds appropriated for the board.

VI. That to carry out the provisions of this act, for the salaries of the civil physicians, office rent, travelling expenses, stationery, clerk hire, and miscellaneous expenses, the sum of thirty thousand dollars be appropriated, to be disbursed and accounted for by the President of the board in accordance with its directions, and on vouchers and forms to be prescribed by the Secretary of the Treasury.

AMERICAN PUBLIC HEALTH ASSOCIATION.

THERE is no doubt that a considerable amount of interest will be manifested in the proceedings of the next meeting of the Public Health Association. It is to be hoped that the opportunity will not be lost either upon the members themselves or upon the people. As has already been announced, the meeting is to be devoted to the discussion of the causes and prevention of yellow fever as based upon the report of the Yellow Fever Commission. There is no doubt that much valuable information will be laid before the Association, and much discussion elicited. It is also possible that a good deal of voluntary twaddle will be indulged in. In view of this latter possibility, it seems highly important that means should be taken to give place on the programme to such voluntary papers only as are passed upon by a committee. Again, in view of the probability that many excellent papers may be volunteered, and the time for their hearing be limited, it would be better, in order to give all a chance, that each author should present an abstract of his views, his paper being published in full in the Transactions.

It was certainly a wise forethought in Dr. Woodworth to present the report of the Fever Commission to this Association, as both can work so legitimately together in giving direction to popular opinion regarding the proper means for the arrest and prevention of a future epidemic. We have every reason to believe that the meeting will be a success. It certainly has the hearty good wishes of the profession of the country.

THE REPORT OF THE SURGEON-GENERAL.

THE report of Surgeon-General J. K. Barnes states that the work on the surgical statistics of the late war is in full progress, and that five hundred and seventy-one cases of wounds and injuries have been prepared for publication, making the aggregate of two hundred and sixty-eight thousand nine hundred and twenty-seven cases now tabulated. The Medical Library is in a prosperous condition, two thousand volumes and three thousand pamphlets having been added during the past year. The index catalogue is completed to date, an item of intelligence in which the profession is much interested in view of the possible authorization of the publication of the work during the next session of Congress. The Surgeon-General very properly urges the measure:

"Of its great utility, not only to the medical profession, but through that profession to the people at large, there can be no doubt, and there are special reasons why it should be placed beyond the reach of casualty, and made accessible to physicians with as little delay as possible. I know of no action within the power of Congress which would at this time so greatly aid medical education, the treatment of disease, and the preservation of the public health, as the publication and distribution of this index catalogue among our leading physicians, surgeons, and hygienists."

Three hundred and fifty pages of the second volume of the Medical History of the War have been stereotyped since last report, and the work in the Record and Pension Divisions has also progressed satisfactorily. The latter is in no small degree due to the increase in clerical force authorized by the last Congress.

Some idea of the extent of labor in this department can be gained from the statement:

"The number of official demands upon this division during the fiscal year for information as to the cause of death in the case of deceased soldiers and the hospital record of invalids was 21,074, being rather more than the average number of such demands received annually since 1870. The number of unanswered cases on hand at the close of the previous fiscal year was 18,697, making the total number of cases to be searched during the year 39,771."

Although the number of assistant surgeons has been reduced to one hundred and twenty-five, there are still fifteen vacancies in that grade.

VISITS OF OUR BRITISH CONFRÈRES.

SIR HENRY HOLLAND and Marshall Hall were the first distinguished English physicians who paid us the compliment of a visit. They came before the days of steam navigation, when an ocean voyage was a serious affair compared with the rapid transit of the palace steamers of the present day. Sir Henry's visit was principally for literary and political observation, but Marshall Hall's was purely professional. He came to mingle with his professional brethren, and to study the growth of our medical institutions. His welcome here was worthy of the man and the reputation that preceded him. A long time elapsed before we had the pleasure of greeting another of the distinguished medical men from the mother country. Then the illustrious Spencer Wells came in 1867, with his wife and daughter. His visit is still remembered with pleasure by his brethren wherever he went.

Erichsen (with Mrs. Erichsen) made us a visit in

1874 or '75, and was received everywhere with marked attention. The Centennial year brought us Lister, Barnes, Adams, Simpson, and Lauder Brunton, all of whom left a most agreeable impress—socially and professionally. And now we see from the last number of the *British Medical Journal* (Oct. 5th): "That Mr. Callender, F.R.S., the eminent surgeon of St. Bartholomew's Hospital, is about to make a December visit to America, for the purpose of examining the surgical institutions and practice of the United States." We can assure Mr. Callender of a cordial welcome.

Reviews and Notices of Books.

STRICTURE OF THE MALE URETHRA: ITS RADICAL CURE. By FESSENDEN N. OTIS, M.D., Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, New York, etc. 8vo, pp. 350. New York: G. P. Putnam's Sons. 1878.

PROF. FESSENDEN N. OTIS has collected the various papers with which he has favored the profession on different occasions during the past eight years, and has given us in a manual of three hundred and fifty pages the results of his large experience in urethral surgery. Like all pioneers, the author has experienced much opposition and adverse criticism from those engaged in the same field. Many of those differing from him in opinion have talked and said nothing; others in a more manly spirit have published their opinions, which are quoted and replied to in the present volume.

Improvements, or, as some regard them, innovations in surgery, that differ essentially from the teachings of the past, are always decried by those who prefer to tread the beaten track, those who shirk the trouble of rooting out old doctrines and prejudices and learning anew. It may be disheartening to the author of any new method to meet with tardy recognition of facts which to him are incontrovertible, but it has always been so. Witness the operation of ovariotomy, which thirty years ago was denounced, and its chief advocate pointed at as a dangerous man. The antiseptic treatment of wounds dragged along for many years, was looked upon as the hobby of a visionary enthusiast, and only his unflinching perseverance has placed it where it now stands, accepted by the majority of practical surgeons of the Old and New World.

The views of the author may appear extreme, but they are substantiated by facts and tests that cannot be gainsaid; that they will yield good fruit may be anticipated—in fact, that they have already modified the treatment of the more unmanageable forms of urethral disease must be fairly admitted. Observations conducted in one direction and over a long period of time, must yield results; the very spirit of emulation which it begets in the many toilers in the same department can only be for good.

Dr. Otis advocates the use of bulbous sounds, a modification of the bougie à boule of M. d'Etiolles and of Bell, which he recommended to the profession in a paper read before the New York Medical Journal Association in 1870. With these sounds he has demonstrated the existence of strictures of large calibre, which he believes to be the most prolific cause of chronic urethral discharges. Most careful examinations with these instruments have enabled him to demonstrate in carefully tabulated reports the existence of multiple strictures which would have eluded the ordinary bougie or metal sound, and have also established the fact that, contrary to received opinion, obstructions are much more frequent in the penile than in the infrapubic urethra. Dr. Otis has also observed a certain more or less constant relationship between the diameter of the flaccid penis and the urethra, or to use his words, he is prepared to state that the relationship is constant and about 1 to 3¼. In a penis of three inches in circumference the urethra would be 30; 3¼, 32; 3½, 34; 3¾, 36; 4, 38; 4¼ to 4½, 40; and that an estimate of calibre made on this basis is reliable when the "urethra-metre" is not available. This latter instrument is an ingenious device by which the urethra can be accurately measured behind a contracted meatus or other obstruction.

The author claims a distinct individuality as regards calibre, for every urethra, "irrespective of standards." He found in ninety-six carefully measured cases that the average was 32 mm., which is a much higher estimate than we have been accustomed to recognize. To quote Dr. Otis: "Sir Henry Thompson distinctly states that if a No. 8 E bougie (16 F) passes easily into the bladder, we may be satisfied that no stricture, or at most a very slight contraction, exists." Again, quoting from the prize essay of Dr. Curtis, whom he regards as the exponent of the urethral surgery of France: "The treatment shall be considered terminated when you shall have made to enter without effort No. 21." Dr. Otis contends that stricture can be radically cured, but that it must ever remain the opprobrium of surgery if we are content with the standards set up by the English and French surgeons. To effect the radical cure it must be completely sundered, either by divulsion or division, and he has presented us with an admirable urethrotome for cutting on the stretch. It is true that it only applies to strictures of large calibre, and that the tight ones must be dilated to admit the larger and more effectual instrument, which latter is certainly most admirably adapted to stricture of the penile portion. Dr. Otis only regards those obstructions as cured which show no disposition to contract when left to themselves. They must not entail the occasional use of a bougie.

Our author has tabulated a large number of cases that have been treated by his method, and in which there appears to be no disposition to return. The results are certainly surprising, and it is the duty of every surgeon engaged in this department to study the subject for himself; that he will do so profitably, with the light thrown upon the subject by the author, we think there can be no doubt.

LITHOLAPAXY; or, RAPID LITHOTRITY WITH EVACUATION. By HENRY J. BIGELOW, M.D., Boston, Mass. Pp. 42. New York: Wm. Wood & Co. 1878.

IN this little book are collected, under one cover, the three papers which Dr. Bigelow has given the profession, describing and illustrating his procedure in the crushing and entire removal, at one "sitting," of stone in the bladder. The whole subject is presented very concisely and yet very clearly. The boldness of Dr. Bigelow's proposition has called forth much criticism, particularly on the part of our English brethren, the *British Medical Journal* having gone so far as to intimate that probably no English surgeon will be induced to attempt so hazardous an experiment. That this method of treating stone in the bladder, however, is a long step in advance of previous methods, we think no candid surgeon who will thoroughly test it

can fail to be convinced. That it will be universally applicable in all cases of stone, even its originator would scarcely assert, but that, in many cases where heretofore lithotrity, with short sittings, has been considered proper, "litholapaxy" is at least equally safe, and in most cases presents even greater immunity from dangerous consequences, will undoubtedly soon be admitted. The operation has been twice performed in the last summer in this city—once at the New York Hospital, and once at St. Luke's. In both instances the success was very gratifying, the removal of the stone having been complete and the recovery of the patients rapid, and unattended with any complication whatever. The book is one which will well repay careful perusal, and surgeons should honestly examine into the claims of an operation which, we venture to assert, will eventually be recognized as the best for a very large proportion of cases of vesical calculus.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 4th, 1878.

DR. S. S. PURPLE, PRESIDENT, IN THE CHAIR.

THE LOCAL TREATMENT OF ECZEMA.

DR. H. G. PIFFARD read an interesting paper on the above subject. (See p. 321.)

The paper being before the Academy for discussion,—

DR. L. D. BULKLEY remarked that he agreed with Dr. Piffard, especially with reference to placing local treatment secondary to constitutional, hygienic, and dietetic. Except in a very small proportion of cases, the view held by most patients that some kind of local treatment was all that was necessary, was incorrect. The paper being upon the local treatment of the affection, however, Dr. Bulkley made special mention of the good effect produced by *hot water*. With him the hot water was a great addition to the therapeutical measures to be employed, especially in the treatment of eczema of the arms and hands, where there was present a thickened and cracked condition of the skin. His habitual method of treating these cases was to immerse the palm of the hand in hot water, allowing the water to cover only the affected portions of the skin. The water should be as hot as could be borne by the patient, and the immersion should be frequently repeated. After soaking the palms for several minutes he applied the diachylon ointment of Hebra spread upon muslin.

In order to prevent the ointment from becoming rancid Dr. Bulkley recommended that it be prepared according to the following formula:

℞. Olei olivarum optimi..... ℥ xv.
Lithargyri ..... ℥ iij.+ ʒ vj.
Coque l. a. in ung. molle, et adde
Olei lavandul..... ʒ ij.
M. ft. unguent.

The oil is to be mixed with two pounds of water, heated slowly, and the litharge to be slowly sifted in. The ointment is to be stirred until cold, and the lavender oil then to be added.

COMPRESSION BY MEANS OF THE ROLLER RUBBER BANDAGE.

The bandage suggested by Dr. H. A. Martin was recommended especially for eczema affecting the lower extremities. It had an advantage over the elastic stocking in the fact that the more the patient walked the more rapid was the improvement.

Dr. Bulkley's method of using it was to have it applied before rising in the morning, to have the patient walk as much as possible during the day, and on going to bed to remove the bandage and envelop the limb in cotton, which could be secured in place by means of a handkerchief.

THE POISONOUS ACTION OF WATER.

Dr. Bulkley directed attention to the poisonous action of water in the treatment of eczema, especially as it occurred in children. If an attempt was made to keep the surface clean by washing it with water, the eruption could not be cured. His teaching was, that water and air should be avoided in the treatment of eczema, except in the cases alluded to. He preferred to use calamine and oxide of zinc in solution, because the remedies could be applied more evenly to the diseased surface.

It had been his custom to use *nitrate of silver* in all stages of eczema.

ECZEMA OF THE SCROTUM AND ANUS.

He had found it most beneficial in the treatment of eczema of the scrotum, and for that purpose had used it dissolved in nitrous ether, in the proportion of from 10 to 30 grains to the ounce.

He had found the same preparation to be very valuable in the treatment of eczema about the anus.

He had also, to considerable extent, employed the nitrate of silver in stick. In treating what was commonly called washerwoman's itch, he almost invariably touched the fissures with the solid stick of nitrate of silver. He had resorted to the same plan of treatment for eczema of the anus; if fissures were present, he burned them thoroughly, and then introduced a pledget of cotton.

DR. JOHN C. PETERS referred to the use of Hamamelis Virginiana in the treatment of eczema. He had employed it with favorable results for more than twenty years, more especially in connection with the eczema associated with a varicose condition of the veins and that which occurred about the anus.

He had used the tincture made from the entire plant. He had also used it internally in doses of one, two, or three drachms, as it was a mild and harmless remedy, and yet it was certainly beneficial. He had also used plumbago with benefit as well as silex.

A large number of remedies had been mentioned by Dr. Piffard, yet Dr. Peters ventured to ask him whether he could reduce their action to any principles of treatment.

DR. GARRISH spoke of the efficacy of baths containing soda or wheat bran, or starch, as a local means of treatment. He also referred to the rubber bandage as a valuable local application.

DR. PIFFARD, in closing the discussion, remarked that in a majority of cases he had not had any unpleasant results from the local use of water sufficient to keep the parts clean. In some cases irritation might be produced, but he believed that, as a rule, there was undue fear with respect to the washing process.

Reference was made to a case in which the patient, under the direction of a physician, had not washed his face for two weeks, and during the entire time had been using an ointment. The man was directed to wash his face, and when he returned the next day his appearance was very much improved.

Dr. Piffard also directed attention to a local application which he had omitted to mention in his paper. It was for the relief of the pruritis, and consisted in a saturated solution of iodoform in ether. When applied, the ether soon evaporated and left iodoform evenly diffused over the surface of the eczematous patch.

With reference to silex, it was to be mentioned that many of our mineral springs, which had acquired reputations in the treatment of skin affections, contained large quantities of silicates. The influence of silex should be studied, especially as it was one of the normal constituents of the body.

Dr. Peters had asked for principles of treatment. The principles were to relieve the different conditions present, and not to endeavor to treat the disease by name. If we had to deal with congestion, as was commonly present in the first stage of an eczema, means must be employed to reduce it, and also to give relief to the subjective phenomena, such as heat, itching, etc. For that purpose astringents were the most serviceable.

In cases in which there was more or less profuse suppuration, there was no better local treatment than that by the use of mercurial preparations. How they checked the suppuration was not well understood.

In the third stage, or dry stage, applications somewhat stimulating in nature should be used, and experience had proved that the best results were obtained by the use of some preparation of tar.

When the tissues were infiltrated and thickened, remedies must be employed which caused either absorption or effusion.

The Academy then adjourned.

Stated Meeting October 17, 1878.

Dr. S. S. Purple, President, in the Chair.

THE PROBLEM OF YELLOW FEVER.

Dr. Octavius A. White read a brief paper upon the above subject, in which he first made reference to the voluminous but unsatisfactory literature of the subject, second, to the fact that its origin, nature, and mode of propagation were yet mooted questions, and then passed to the consideration of a few prominent points taught us by experience in connection with the epidemics of former years.

With reference to the present epidemic but little at present was known, except that it originated in a populous city, and from that point had spread over a large area of our country.

Dr. White believed that the present epidemic afforded the most favorable opportunity which had ever been given to this country to investigate certain questions with reference to yellow fever. He further believed that the disease could not prevail as an epidemic in this country without the presence of certain conditions, namely: heat, moisture, and the effluvia arising from decomposing animal matter. A vitiated state of the atmosphere he regarded as a prime condition necessary to its existence, and a protracted high range of temperature was a potent element in the propagation of the yellow fever poison. He thought the general belief was that the disease possessed a specific element, and that the theory of a *contagium vivum* was the most plausible by which to explain its origin and spread. The present scourge originated by importation.

Yellow fever was strictly a disease incident to tropical latitudes, and the germs perished outright upon the appearance of a heavy frost, or after the occurrence of a succession of light frosts.

Those who suffered first and most severely were invariably freshly arrived emigrants, and the severity of the attack was in direct proportion to the distance of their original dwelling from the tropical region. Reference was then made to cases which seemed to prove that acclimation was not a sure protection against the disease.

There were some distinguished writers who still affirmed that the disease was not contagious.

His own experience in connection with yellow fever had led him to the following conclusions: that the disease was propagated through a specific *materies morbi*, and that the peculiar conditions necessary for its diffusion were superabundant moisture, intense heat, and general filth.

He believed it to be impossible to introduce the disease except into places where those conditions were present. With reference to treatment, that which seemed successful during one season might differ from that required in another, because of the variation in the type of the disease. For example, the malarial element might prevail in one season and some other element in the next, and thus necessitate a variation in the plan of treatment. In spite of such variations, however, the disease never lost its individuality.

The type of the disease always varied in each particular locality in which it prevailed, the modifications arising from accidental peculiarities of season and sanitary surroundings. Every fact bearing upon those points Dr. White believed to be of vital importance, because of its close relation to the question of prevention.

With reference to the possibility of communicating the disease by contagion, the present system of quarantine in our country had been found inadequate. The quarantine regulations at some of our harbors had proved themselves efficient, but the same vigorous system should extend like a cordon along our entire coast. Arguments alone, however, could not determine any one of the points under consideration in connection with yellow fever, but they must be left to be adjudicated by facts.

Dr. White then directed attention to the extension of the disease as exhibited by Dr. Woodworth's tables. In every instance where the disease made its appearance in a new locality, the first death was in the person of one who had been sent from New Orleans. The deduction was, that if the disease was simply malarial in character, it might have broken out in all those places at the same time.

The paper being before the Academy for discussion—

Dr. Austin Flint remarked that the prevalence of this terrible epidemic might bring great good out of great evil, if it led to investigations which hereafter would enable us to stamp out a similar invasion. The important questions to be placed before the profession should relate to that practical result.

With reference to certain etiological points in connection with yellow fever, the opinion of the profession at the present time was quite unanimous, and these points had an important bearing upon the prevention of the disease. He believed it was generally received that the disease depended upon a specific cause or germ. The term germ might be used figuratively or literally, but he thought favorably of its use in the latter sense.

Again, he thought it was generally accepted that certain accessory circumstances were requisite to give vigor to that poison, such as accumulation of filth and various deviations from good sanitary conditions.

Neither factor alone could give rise to yellow fever, but it was a union of both which led to the development of an epidemic. If such a view was correct etiologically, it should be in the power of the medical profession, aided by the proper authorities, in the first place to prevent, with considerable certainty, by properly regulated quarantine, the introduction of the germ. It should also be in the power of the profession and proper authorities to stamp out an epidemic by the prompt and efficient employment of disinfectants.

He thought one great point to be determined was whether the history of the present epidemic corroborated the views now generally held in relation to yellow fever, or whether they tended to their overthrow.

In studying the problem of yellow fever, it was very important that the facts bearing upon the points stated should be ascertained in most of the places which had suffered from the disease. Citations of authorities, reports of microscopical examinations, etc., would not meet the requisition, but what was necessary was an accumulation of facts which would enable all to study the subject and arrive at conclusions as well as those who were engaged in collecting them.

How far any measures had been resorted to with the view of disinfecting the invaded cities, or what had been done with reference to stringency in quarantine regulations, was not at the present time known, and could only be determined when the epidemic had fully subsided.

Had such measures been efficient, or had they been inefficient?

Dr. Flint expressed his own strong conviction that with timely and efficient measures of quarantine and disinfection, this epidemic disease might be prevented, or, if not prevented, it might be invariably crushed.

Dr. John C. Peters exhibited maps showing the course of the present epidemic, and stated that yellow fever was introduced by importation into New Orleans as early as May 23d of this year, and that before July 12th. thirty or forty deaths had occurred, the reports of which, at the time, were suppressed.

Commenting upon the origin of the disease, Dr. Peters traced it to the spotted typhus which was carried to Martinique by the French, where, by union with malarial fever, a new disease was developed which was called yellow fever. He believed that in every instance in which yellow fever had appeared in this country it could be traced to importation, and furthermore, that if it was brought into a clean, healthy place it would disappear. Typhus was one of the most contagious of diseases, and yet, with properly regulated hospitals, absolute ventilation, and perfect cleanliness, the disease could be stamped out. Typhoid fever became infectious by changes which took place in the discharges of the patient after they had left the body, and the same was true of cholera and yellow fever. Unless the bed and body linen containing the perspiration from a yellow fever patient was washed very early and disinfected, it became a carrier of the disease. He thought that clothing merely exposed to the atmosphere of the place in which yellow fever was prevailing, or shut up in trunks in such localities, would not convey the disease. It must have been upon the body of the sick, or hanging in the room occupied by the sick, or in those in close proximity to the sick, in order to become so contaminated as to be able to communicate the disease to those who subsequently came in contact with it. He believed that with thorough health officers, and an efficient guard of troops to enforce regulations with reference to cleansing the streets, the disease would have been stamped out in the cities where it is now prevailing.

Thorough cleansing and careful quarantine were the measures by which an epidemic of yellow fever should be met.

Dr. Elisha Harris remarked that some of the plainest truths, with reference to preventive measures, seemed to have been overlooked in the region where yellow fever was prevailing. He believed that a period had been reached in the experience of the medical profession which would enable them to say what preventive measures were required, and furthermore there was no doubt that the doctrine of stamping out the disease was correct. The single purpose should be to make investigations with that end in view, and to accomplish what was desired involved the whole question of State authority and the supervision of quarantine service.

Dr. A. C. Post suggested questions which he regarded as practically important, especially with reference to the exclusion of the disease. They were suggested as a basis of investigation with reference to preventive measures.

1. Is yellow fever contagious, or personally communicated by contact, or by inhalation of noxious germs from the lungs, or from the external surface of the patient?

2. Are the germs of the disease given off from the excretions of the patient, as they pass from the body, or after they have undergone fermentation?

3. Are the germs of the disease given off from the bodies of those who have died of the disease before or after interment?

4. Is it safe to allow persons who have been exposed to the disease by a more or less protracted sojourn in an infected district to escape to a healthy locality in town or in country, provided that extreme care is taken to exclude fomites?

5. Is the clothing on the body of the person so escaping, when fully exposed to the air, to be regarded as fomites capable of reproducing the disease?

6. When clothing or merchandise has been contaminated by exposure within an infected district, can it be thoroughly disinfected by ventilation in a pure atmosphere, by boiling or steaming, or by the chemical action of gases, such as chlorine, bromine, sulphurous acid, etc.?

7. Is it safe to allow cars or boats to go from an infected locality to a town or city not infected?

8. Would it not be a wise precaution to have passengers conveyed to such uninfected towns by cars or boats which have not been within the infected district?

With reference to the fourth question, Dr. Post expressed the opinion that, if fomites were excluded, it was safe to allow persons to escape.

With reference to the sixth question he thought the hair of females should be excluded.

Dr. Herzog suggested the following questions:

Granted that yellow fever was an imported disease, why was it that in New Orleans the disease prevailed epidemically one year and the next year the city was exempt? Why was it that Louisville was exempt one year and perhaps invaded by an epidemic the next? Why was it that a large number of towns in the infected region of country escaped altogether? He believed those questions could not be answered within four or six weeks, or by a simple commission composed of three persons, but that an extended investigation was necessary in which there was a co-operation of medical men, engineers, meteorologists, and others.

Dr. Peters, in answer to one of Dr. Post's questions, stated that he believed, however filthy the city might be into which the disease was introduced, if the physicians and nurses and attendants would do their full duty, and disinfect everything which came in contact with the patient, and everything which was discharged from him, that the disease would be arrested in every insiance.

Dr. Anderson remarked that the important question was how to prevent the disease from developing. That being done, other measures were unnecessary.

There being no further discussion, the Academy adjourned.

New Instruments.

A CHISEL FOR DIVIDING BONE IN THE OPERATION OF OSTEOTOMY.

By CHARLES F. POORE, M.D.,

NEW YORK.

The accompanying cuts represent a chisel for dividing the bone in the operation of osteotomy. They should have appeared in my paper on Osteotomy in The Medical Record of September 7th.

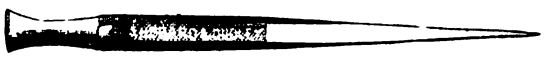

Fig. 1.

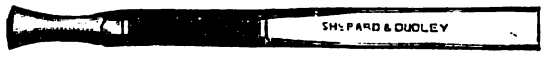

Fig. 2.

The requirements are: 1st. That the bone shall not be splintered by the instrument being too thick. 2d. That the chisel shall penetrate readily into the bone.

The total length of the chisel is five and one-half inches. The handle is two and a half, and the chisel proper three inches long. I have two chisels, one three-eighths, the other four-eighths of an inch wide.

Beginning at the end of the handle the instrument should gradually slope down to the cutting edge, and from the former to the latter point the flat surface should present a perfectly straight line. The steel should be tempered in such a manner that the edge will not turn, and at the same time not be so hard as to be brittle. Fig. 1 represents a profile view. Fig. 2 shows the flat surface.

Quinia and tannic acid (4 to 1) in solution in water, syrup, liquorice, etc., so highly recommended by Prof. C. Binz, of Bonn, in the abortive treatment of pertussis, has found a valuable supporter in Dr. C. F. Swan, of South Chicago, Ill.—*Chicago Medical Journal and Examiner.*

John Hilton, F.R.C.S., F.R.S., the eminent London surgeon, formerly of Guy's Hospital, died the 14th ult., in his 74th year. He had been President of the R.C.S., and of the Pathological and New Sydenham Societies. He was Surgeon-Extraordinary to the Queen, etc. His best-known work was "On Rest and Pain;" his other works were "Lectures on the Cranium," "Clinical Lectures on Surgery," "On Puncturing the Bladder per Rectum," and many contributions to various medical journals.

Correspondence.

YELLOW FEVER AND FILTH.

To the Editor of The Medical Record.

Dear Dr.:—In your "editorial," Sept. 14, 1878, you quote from a letter from New Orleans as follows: "The cleaner the streets and the more fashionable the quarter, the greater apparently is the violence; while the filthiest streets are either wholly free from taint, or have only widely-scattered cases of a mild type."

This, you say, of course, combats our generally received ideas.

It only apparently combats those ideas. In yellow fever one attack, as a rule, confers immunity. New Orleans, for years past, has suffered from repeated circumscribed epidemics, *i. e.*, outbreaks of the fever confined to certain localities. These partial epidemics have always originated in the filthiest quarters.

The people of these districts are generally poor and ignorant, neglectful of all sanitary measures, and are unable to flee from the pestilence. Those who recover are not susceptible to another attack. When these partial epidemics occur every year or two, only those children born during the interim, or strangers, or those residents whose good habits and robust health protected them previously, who have since become careless or debilitated, furnish material for the fever.

Thus each succeeding epidemic finds less material, until the disease in these localities becomes almost exclusively confined to strangers. Hence the name, "Stranger's fever," by which it is called in some portions of the tropics.

Everything else equal, the cleaner the quarter, the more manageable the disease. This, I take it, is a universal law, which no imperfect deductions can refute.

Very truly yours,

Benj. S. Purse.

Savannah, Ga., Oct. 10, 1878.

YELLOW FEVER AND FROST.

To the Editor of The Medical Record.

Dear Sir:—I noticed a statement in the Record of September 21st, that the special poison of yellow fever is killed by frost. I believe this has been the general opinion until recently, though many examples have occurred that would seem to render it doubtful.

I therefore beg leave to submit the following experience, which may be of interest at the present time:

A severe epidemic of yellow fever occurred on board the U. S. S. Susquehanna, at Grey Town, Central America, in 1858. The Susquehanna came direct from England and the Mediterranean a few months before with a perfectly healthy crew, and yellow fever was unknown at Grey Town. As soon as the fever showed itself the vessel went to sea, bound north, but in the course of a few days so many firemen and coal-heavers were prostrated by the disease that she was obliged to touch at Jamaica, *en route* to procure men to work the ship.

By kind permission of the authorities nearly one hundred cases were landed at the Royal Naval Hospital, Kingston, and the ship proceeded on her way north, the disease still continuing its ravages, and on her arrival at New York one hundred additional cases were landed at the Quarantine Hospital.

Yellow fever had prevailed on board the Susquehanna on a previous cruise, but in the interim she had

been exposed to the cold climate of the north, and as there was no fever at Grey Town and no record that the scourge had ever visited that place, the supposition is that the poison had remained dormant in the hold of the ship, awaiting the proper surroundings of temperature, moisture, etc., to resume its activity. The bilges of the ship were not accessible at their after part, and on tearing up the planking, were found very foul. Nearly all those who were employed or slept on the lower deck, such as firemen and coal-heavers, contracted the fever, whilst all who were employed or slept on the upper deck escaped, plainly showing the local origin of the disease.

After the ship had been thoroughly fumigated and disinfected, and had remained exposed to wind and weather for several months, two firemen* who were sent on board to examine the condition of the machinery, contracted the fever a second time, so enduring was the nature of the poison. After this sad experience the Susquehanna remained dismantled in the harbor of New York, exposed to the freezing temperature of several winters, and was again put into commission as the Flag Ship of the North Atlantic Squadron; but on her return to the tropics the fever reappeared aboard of her.

From the above facts I am led to believe that frost does not kill the yellow fever germ, but merely renders it torpid until congenial influences and surroundings enable it to resume its activity and reassert its dreadful sway.

Very respectfully yours,

ROBERT T. MACCOUN, M.D.,
U. S. Navy.

POLYPOID GROWTHS IN THE EAR.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR:—A friend has called my attention to the fact that in my article, recently published in your journal ("Practical Remarks on the Removal of Polypoid Growths from the Ear," July 27, 1878), I have not stated with sufficient clearness when traction and when simple excision should be employed in the removal of aural polypi by means of Blake's snare. As the criticism seems to me to be justified by the facts, will you grant me the privilege of stating more fully in your columns my views in regard to the point in question?

Where the polypus is moderately firm and of large size,—so large that the exact situation of the peduncle cannot readily be ascertained, and where at the same time its physical characteristics (color, texture, mobility) justify the belief that it grows from the mucous membrane of the middle ear (tympanic cavity proper or some part of the communicating system of cells), I prefer to use traction. The peduncle, in these larger polypi, is often a mere cord, lying in a sinus into which it would be very difficult to introduce a wire loop. In such cases, if traction be used upon the main mass of the growth, one often succeeds in pulling out this long peduncle entire; whereas, if the mass be simply excised, by means of repeated seizures, the last excision will still leave, concealed within the sinus, a peduncle, which it would be very difficult to destroy by caustics, and which—if not destroyed—will almost certainly reproduce another polypus.

On the other hand, if the polypus is soft and of such a size that the point of origin of the peduncle can be ascertained, it is better, I believe, to excise the mass by simply drawing the wire loop into the canula, without exerting any traction upon the mass as a whole. Owing to the softness of these masses, traction would merely cause the patient unnecessary pain without removing the growth more perfectly than if simple excision had been practised.

Where the polypoid growth is situated in the tympanic cavity proper, excision alone should be practised.

Finally, if the polypus be firm in texture and have a short and broad peduncle that springs from the cutaneous lining of the external auditory canal, excision alone should be employed.

ALBERT H. BUCK, M.D.

* Vide account of yellow fever on board U. S. S. Susquehanna, *American Journal Medical Sciences*, 1858.

AN INDEX RERUM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—Dr. Hurd's mode of noting important facts in medical literature is a good one, but the same end may be accomplished *without spoiling his books*. I have a small set of pigeon-holes made to fit my desk. These holes are four and one-half by three inches in size, and are labelled from A to Z. I take common foolscap, double each sheet twice upon itself, cut it into eight slips, and turn up a margin of half an inch on the left side of each slip, which is about eight inches by three inches in size, and large enough to note any *important* fact. In reading medical works, journals, or scientific periodicals, I note down on one of these slips any fact or statement I wish to preserve, head it with its appropriate "catch-word" in a larger hand, and note the authority, volume, and page. This slip I place in its proper pigeon-hole, and thus provide myself with an alphabetical register of medical and scientific facts (index and notes combined)—a *ready reference*, which I have found of great value.

The simplicity of this plan (which I have used satisfactorily for fifteen years) will commend it to the student and busy practitioner.

At the end of the year the slips may be arranged in alphabetical order, and pasted together by their folded margins into book form.

C. J. CLEBORNE, M.D.

NAVAL HOSPITAL, Portsmouth, N. H.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.—Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 19, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Oct. 12, 1878.	0	25	43	4	0	35	0	0
Oct. 19, 1878.	0	28	43	1	1	48	0	0

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE. WASHINGTON, D. C., Oct. 19, 1878.

NATIONAL QUARANTINE REPORT.—Abstract of sanitary reports received during the past week under the National Quarantine Act:

New Orleans, La.—During the week ending yesterday afternoon, there were 976 cases of yellow fever

and 235 deaths, of which 89 cases and 36 deaths occurred in the last twenty-four hours reported. Total cases, 12,182; deaths, 3,635.

No cases of yellow fever at *Port Eads* or *South West Pass* during the past week.

Morgan City, La.—There were 16 deaths from yellow fever during the last week. The number of cases was incorrectly given for last report. Total cases to date reported to be about 432; total deaths, 87.

Mobile, Ala.—For the week ending yesterday noon there were 56 cases of yellow fever and 12 deaths. Total cases, 93; deaths, 32.

Decatur, Ala.—73 cases of yellow fever and 12 deaths during the week ending yesterday. Total cases, 155; deaths, 27.

Ocean Springs, Miss.—During the week ending yesterday noon there were 25 cases of yellow fever and 1 death. Total cases, 128; deaths, 29.

Pass Christian, Miss.—There were 32 new cases of yellow fever and 4 deaths for the week ending yesterday. Total cases, 126; deaths, 13.

Bay St. Louis, Miss.—During the week ending yesterday evening there were 52 cases of yellow fever and 12 deaths. Total cases, 338; deaths, 68. The fever is on the decrease for want of material. The cases occurring now are more malignant.

Friar's Point, Miss.—8 cases of yellow fever and 2 deaths during the week ending yesterday evening. Total cases, 21; deaths, 6.

Crystal Springs, Miss.—The yellow fever is confined principally to the country around *Dry Grove* and *Lebanon Church*. No case as yet occurred within the limits of the village of Crystal Springs. During the past week there were 31 cases and 8 deaths. Total cases, 112; deaths, 44.

Baton Rouge, Miss.—During the week ending yesterday at 9 A.M. there were 301 cases of yellow fever and 16 deaths. Total cases, 2,170; deaths, 129.

Pascagoula, Miss.—Total cases of yellow fever at quarantine to Oct. 12th, 5; deaths, 2.

Scranton, Miss.—Total cases of yellow fever to Oct. 12th, 5; deaths, 3.

Vicksburg, Miss.—For the past week there were 32 deaths from yellow fever in the city and 64 in the county of Warren, outside of the city. Total deaths in city and county, 1,074.

Holly Springs, Miss.—Total number of cases of yellow fever to yesterday evening, 1,117; deaths, 285. About 200 cases under treatment. The fever is spreading into the surrounding country. A slight frost occurred in the night of Oct. 16th.

Grenada, Miss.—For the week ending yesterday evening, there were 4 new cases of yellow fever and 2 deaths. The fever is spreading into the country. In 14 families, containing 97 unacclimated persons, there occurred 41 cases and 2 deaths during the past week. Total deaths in Grenada and adjacent country, 327.

Bolton, Miss.—Total cases of yellow fever to yesterday evening, 117; deaths, 31. The first case occurred Aug. 12th.

Hernando, Miss.—During the week ending yesterday evening, there were 50 cases of yellow fever and 23 deaths. Several of the cases from one to three miles in the country. Total cases, 133; deaths, 56.

A light frost was observed this morning.

Memphis, Tenn.—For the week ending the evening of the 17th inst. there were 108 deaths from yellow fever. Total deaths, 2,892.

Dr. Thornton, in charge of the Marine Hospital Service at Memphis, has the fever.

Chattanooga, Tenn.—101 new cases of yellow fever and 30 deaths for the week ending at four o'clock P.M. yesterday.

Paris, Tenn.—No cases of yellow fever or deaths for the week ending yesterday afternoon. A frost has occurred, and no further trouble is expected.

Milan, Tenn.—The first case of yellow fever (a refugee) occurred Aug. 26th. The first case among inhabitants Oct. 12th. Total cases to yesterday, 3; deaths, 3.

Cairo, Ill.—No report of cases or deaths received. Assistant Surgeon Roswell Waldo, of the Marine Hospital Service, died of the fever at his post yesterday.

St. Louis, Mo.—4 deaths from yellow fever at quarantine during the past week.

Louisville, Ky.—For the week ending yesterday there were 15 new cases of yellow fever and 5 deaths. Of these numbers 14 cases and 5 deaths were among the inhabitants in the locality before described. Total cases, 127; deaths, 54; of which 89 cases and 34 deaths were among refugees.

Key West, Fla.—No new cases of yellow fever during the week. One death occurred on the 12th inst. Total cases, 37; deaths, 17.

No reports received from the following places, where the yellow fever exists: Plaquemine, La.; Port Gibson, Miss.; Mississippi City, Miss.; Greenville, Miss.; Spring Hill, Miss.; Water Valley, Miss.; Biloxi, Miss.; Canton, Miss.; Brownsville, Tenn.; Grand Junction, Tenn.; Hickman, Ky.; and Gallipolis, Ohio.

Havana, Cuba.—24 deaths from yellow fever and 1 from small-pox for the week ending Oct. 12th. The deaths from all causes for the months of April, May, and June last were 3,030, an increase of 989 deaths over the total for the same months of 1877; of this *increase* 535 deaths were from small-pox, 98 from yellow fever, and 130 from diarrhœa. The deaths from yellow fever the past summer are recapitulated as follows: April, 28; May, 53; June, 184; July, 504; August, 374; and September (to the 28th), 168—making a total of 1,311 deaths.

Matanzas, Cuba.—Official returns of the Board of Health for the months of June, July, August, and September show that during that period there were 279 cases of yellow fever, with 91 deaths. Cases are now rare, and the fever has almost ceased.

Morocco, Africa.—Advices from Tangier up to Sept. 21st report the prevalence of cholera, small-pox, and malignant fevers throughout the empire, except in the country fronting the Spanish coast. Small-pox prevails in every port except Tangier and Tetuan. The deaths from cholera at Casablauca, a port of 5,000 inhabitants, were on the increase, and numbered 103 on the 17th of September. Hundreds have died in the interior from cholera, fevers, and starvation, especially in the middle and southern provinces.—JNO. M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

THE LATE DR. STEPHEN ROGERS.—At the last meeting of the Medico-Legal Society, held October 2, 1878, the following resolutions of respect were unanimously passed:

Whereas, Our beloved associate, Dr. Stephen Rogers, has been removed from us by the hand of death, to show our high appreciation of him as a physician, associate, and friend, we hereby offer the following resolutions:

Resolved, That we, the members of the Medico-Legal Society, tender to the bereaved and intimate friends of the deceased our heartfelt sympathy in the removal of one whose life, though brief, was full of

good deeds; whose example (though life is ended) lives in the memory of his associates and friends; whose character death cannot rob of its lustre; whose pure life, though finished on earth, is but begun in a higher sphere.

Resolved, That a copy of these resolutions be sent to the family, and also that they be published in all the prominent medical journals and newspapers in the country.

WILLIAM SHRADY, LL.B.
C. S. WOOD, M.D.
Attest: THOMAS C. FINNELL, M.D.
G. W. WELLS, M.D., Sec. Medico-Legal Society.

MEDICAL HONORS.—At the meeting of the British Medical Association, held at Bath, August 6, 1878, the following eminent foreigners were elected honorary members, viz.: Dr. Theodore Billroth, Vienna; Dr. Charcot, Paris; Dr. Esmarch, Kiel; Dr. O. Liebreich, Berlin; Dr. Ludwig, Leipsic; M. Pasteur, Paris; and Dr. L. A. Sayre, New York.

USES OF IODOFORM.—Dr. Cuffer extols the anæsthetic action of iodoform in fissura ani, hemorrhoids, laryngeal affections, and ulcerated cancers, especially those located on the face, in the mouth, breast, and cervix uteri; also its undeniable action on simple ulcers. In the affections of the larynx and uterus he employs a ten per cent. solution of iodoform in ether, by means of spray.—*Centralblatt f. Chir.*, No. 25.

SQUILLS AS A DIURETIC.—M. Fort reports in the *Paris Médical*, a case of ascites in which he employed with success the following treatment. The patient was a child of five years. The ascites was of long standing; its cause could not be ascertained, and from its course it appeared to be idiopathic in character. He prescribed moderate frictions over the abdomen, morning and evening, with a mixture of tincture of squills and tincture of digitalis. Every third day a teaspoonful of eau-de-vie allemande (a preparation consisting of jalap, turbith, and scammony dissolved in brandy) was administered as a purgative. Three times a day a teaspoonful of the following was given, either pure or in gruel:

℞. Oxymel scillæ..... ʒ xijss.
Syrupi digitalis..... ʒ vi.
Syrupi acaciæ..... ℥ v.
M.

The cure was complete at the end of two months.

NEURALGIC TOOTHACHE.—Dr. Darvaris recommends quinine powder as a local application for neuralgic toothache. The patient should dip a finger into fresh water and then into the quinine powder, and rub it forcibly on the gum in the neighborhood of the painful tooth. The application should be repeated two or three times in succession. The bitter taste of the medicine should be borne as long as possible. Dr. Darvaris tried this remedy first on himself, and then on numerous other persons, among them many who had tried other remedies in vain. It invariably produced a rapid alleviation of the pain.—*Allg. med. Cent. Zeit.*

MILK AS A PROPHYLACTIC AGAINST LEAD-POISONING.—The *Journal de Médecine* reports a remarkable instance of the regular consumption of milk by workmen in white-lead factories. It was noticed in some French lead-mills, that among a large number of workmen, two, who daily consumed a large quantity of milk, remained free from the injurious effects of the lead. A daily ration of a quart of milk was then given to each workman, and lead-colic soon became unknown. From 1868 to 1871, no case of colic occurred in these factories.—*Allg. med. Cent. Zeit.*

A NEW medical journal for London, the *International Medico-Chirurgical Gazette of London*, to appear Nov. 1st next, and weekly thereafter. It is to be connected with the *Allgemeine Wiener Medizinische Zeitung.*

CURARE IN EPILEPSY.—Kunze states that *curare* is a cure for epilepsy of long standing. He recommends a solution of gr. vij. to ℥ lxxv. of water, and gtt. ij. of hydrochloric acid. Inject gtt. viij. of the solution under the skin once a week. He has obtained cures from eight to ten injections in cases of several years' standing.

KUMYSS.—Chicago has, for several years, been selling *kumyss* as a beverage as well as a medicine. During the summer it is quite fashionable. "Kumyss on draught," say the placards in the windows.

EDWARD BELLAMY, F.R.C.S., advocates, in a recent issue of the *Lancet*, the treatment of wounds of the superficial palmar arch by acupressure when the bleeding points cannot be secured.

FEMALE PHYSICIANS.—The following facts, which are taken from *l'Avenir des Femmes*, a paper edited by M. Léon Richer, may prove interesting to our readers:

The Medical Faculty of Boston apparently deserve the credit of being the first to receive female students; this was in the year 1848. Zurich admitted its first female student in 1862; and in Russia, the École de Médecine de Saint-Pétersbourg was thrown open to women in 1872. In Germany, the Universities have only in rare instances granted diplomas to women. The first female to receive the diploma of Doctor of Medicine in that country was Mlle. von Siebold. Since 1874, Leipsic has graduated three female doctors. In Italy, the higher schools were only established in 1864, the municipality of Milan taking the initiative; and up to the present time only one woman has been granted a diploma. This was Mlle. Giraldi, who received the degree of Licentiate of Letters in Naples. In France, the first "bachelière" (Mlle. Daubié) was received in 1861, and the female physician (Mde. Garret) in 1870. The University of London has been the most recalcitrant. It is only since the vote of the 15th of last January that women have been admitted to the examinations for all the diplomas, viz., those of medicine, arts, sciences, and law.

CREMATION.—A decree, legalizing the cremation of human bodies, went into force in Gotha on October 1st. A special edifice has been constructed for the purpose of cremation.

M. EMILE GROMIER, Professor of Legal Medicine in the Medical Faculty of Lyons, died recently at the age of 68 years. In 1845, he received the appointment of Medical Expert to the Courts, a position which he held for twenty-five years. At the reorganization of the École de Lyon, in 1854, he was appointed Professor of Internal Medicine, and at the creation of the Faculté de Lyon, in 1877, he obtained the chair of Legal Medicine, a position to which his labors in that special field gave him a just claim.

POISONING BY THE CYANIDE OF POTASSIUM.—Dr. Auguste Fisher, of Prague, believing that he had discovered in the hydrochlorate of ammonia, an antidote for the poisonous effects of cyanide of potassium, recently submitted his discovery to the test of personal experiment. He expired in the most intense suffering a few minutes after taking the drug. He was the author of a work entitled: The Way to Render Cyanide of Potassium Innoxious.—*La France Médicale.*

Original Lectures.

CLINICAL LECTURE ON UTERINE FIBROIDS.

DELIVERED BY

T. GAILLARD THOMAS, M.D.,

PROFESSOR OF OBSTETRICS AND THE DISEASES OF WOMEN AND CHILDREN IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

SUBMUCOUS FIBROID.

GENTLEMEN:—The first patient whom I present to you to-day is Margaret C., a native of Ireland, thirty-seven years of age, and unmarried. She comes to us with a very interesting ailment, and as she is unwilling to give the history of it in public, I will run briefly over it for you as she related it to me in my private room. Eighteen months ago, having previously enjoyed good health, she was taken with a violent uterine hemorrhage, without any assignable cause. It has never ceased up to the present time, except for very brief periods, and almost all the other symptoms from which she is suffering, and which will be mentioned presently, are referable to this long-continued loss of blood. As previous to the first appearance of the hemorrhage she had subjected herself to the risk of utero-gestation, she has gotten the idea that she is pregnant, and that the flow is due to the retention of the fœtus in the uterus. Indeed, she declares that a physician distinctly told her that this was the case. This belief has naturally caused her a very great amount of mental suffering, and so much has she worried over the matter that she has become almost a hypochondriac in consequence. At present I find that her pulse is 120, and though it is, no doubt, somewhat excited by coming before you, it is probably never below 100. This is because her blood has become so impoverished by the constant drain upon the system, that the heart has to act much more frequently than it ought normally to do. She is very anæmic in appearance, and there is a systolic murmur at the base of the heart.

Suppose, now, that, instead of coming here, this patient had presented herself at your office, what would have been the suggestions which would have presented themselves to your mind as accounting for the symptoms which are given? As the woman is thirty-seven years of age, one of the first ideas to occur might be that she was approaching the "change of life," and that the flowing was probably in consequence of this. But you must never take any such thing for granted; and in connection with the menopause it is well to remember that the irregularities incidental to that period are not nearly so marked as in this case. You should, therefore, insist on a physical examination before expressing any opinion whatever upon it.

Accordingly, with the view of finding out, if possible, the cause of this long-continued flooding, I proposed an examination to the patient, but found it somewhat difficult to make on account of her peculiarly excitable condition. The woman being placed upon her back, when I passed my fingers into the vagina I at once felt quite a large mass protruding from the os uteri, which seemed globular in outline, and was altogether too hard for any product of conception. I felt confident that it could be one of only two things: what I show you in this model (a fibroid projecting from the mouth of the uterus), or what I show you in this one (an inverted uterus). Now let us suppose that you were practising in some remote district, where it was impossible for you to call into consultation any expert in such matters, and this case should come into your hands. It would be very important for you to be able to decide which of these two conditions was present, so that you might know whether to remove the mass or not; and the question naturally arises whether it would be possible for you to determine the matter with absolute certainty. I do not hesitate to say with the greatest confidence that it would; and I will show you in what manner it could be done. In the first place, one is not able to make out the character of the mass by grasping it with the fingers. Some authorities have declared that an anæsthetic should never be given when you are about to remove a fibroid, on account of the value of the sensations of the patient in a diagnostic point of view. I am quite sure that all manipulations would in our nervous patient cause an outcry which would render this means of diagnosis very unreliable. How then shall we settle the diagnosis? The method that I employed in the examining-room was as follows: I first resorted to conjoined manipulation, the patient still lying upon the back. Now, by this means we ought to find simply a vacant space in the ordinary position of the uterus, in case the organ is inverted; but, instead of that, I could distinctly make out a firm, solid body in this situation. Next, I placed the woman upon the side, in Sims' position, and, after the adjustment of the speculum, endeavored to introduce the uterine sound. I had no difficulty in slipping it around past the tumor into a cavity, which there could be no doubt was the cavity of the uterus, to the extent of two and a half inches, and in the normal curve of the organ. Furthermore, I rocked the sound backward and forward while it was still in the cavity, and, placing my disengaged hand upon the abdomen, I could very plainly feel the fundus moving under it. Then, finally, in order to make assurance doubly sure, I passed the sound into the bladder, and, introducing the forefinger of my other hand into the rectum, I could again feel the same hard mass between them which I had detected on conjoined manipulation; while, if the uterus had been inverted, the end of the sound would have been separated from the finger only by the walls of the bladder and rectum. If you were so situated as I have intimated, and had obtained these results by your examination, you could be perfectly certain that you had a fibroid, and not an inverted uterus, to deal with, and need feel no hesitancy about operating.

Now as to the operation demanded here; what is the best method of performing it? As the patient lives in a remote part of the city, and is furthermore not altogether in a normal mental condition, I should not be at all willing to run the risk of operation at the clinic, unless I should put in a very firm tampon before sending her away, and could feel sure that she had some reliable physician to look after her when she had returned home. I want her to enter my service at the Woman's Hospital, so that I can operate under the most favorable circumstances; but she expresses herself as being entirely unwilling to go into the institution. I fear, therefore, that she will pass from our notice, and that these profuse hemorrhages will go on, and perhaps increase, until she will finally succumb to them. The method which I should adopt is this: I would place the patient on the side, and, having introduced the speculum, seize and make moderate traction upon the fibroid by means of a pair of vulsellum forceps. Then with a spoon made of steel, nickle-plated or covered with silver, and having a serrated

edge, which I have described under the name of the "serrated scoop," and which I have found exceedingly useful in such operations, I would cut through the attachments of the tumor, completely severing it at the base. The separation is accomplished with the greatest rapidity and ease in this manner, and such a sawing movement is not accompanied by much hemorrhage, for the reason that the vessels are so much bruised during their division.

This instrument is especially adapted for the removal of fibroids with very large bases, and several times I have been able to accomplish this successfully by it in cases where I had previously failed by other means.

INTERSTITIAL FIBROID.

Our next patient to-day is Mrs. Catherine F., a native of the United States, and thirty-nine years of age. She tells us that she has been married twice, but that she has never had either any children or miscarriages. She was first married twenty years ago, and her husband lived for five years. After his death she remained a widow for two years, when she married again, and since then has continued to live with the second husband up to the present time. It is not on account of sterility, however, that she now comes to us for advice. This is the history which she gives of the trouble of which she complains: She says that for the last four or five years she has suffered from a feeling of heaviness and distress, accompanied by bearing-down pain, across the lower part of the abdomen, and that just about a year ago she was taken with a severe flooding, which was accompanied and followed by much more severe pain than she had been accustomed to feel, together with some febrile reaction. For a time she was confined to her bed and was attended by a physician, who told her that she had an "abscess about the womb," and at last recommended that she should go into a hospital. Accordingly, she did this, and remained there for a month, when it proved that she had not an abscess, though the medical men in attendance were at one time on the point of operating upon her. When I ask her from what she is suffering at the present time, she tells me that she has constant pain, and every two weeks a severe flooding, while dyspareunia is also a prominent symptom.

Now, gentlemen, here is a very clear history indeed of a certain set of symptoms, of which the patient comes to us to be relieved. In the first place (and this is by far the most important feature of the case), she is almost bleeding to death. A short time ago, as I had occasion to remark at a previous lecture, a gynecologist of the highest reputation was arguing with me that there should really be no difference in meaning between the terms metrorrhagia and menorrhagia. Now, who is willing to call the hemorrhage in this case menorrhagia, a term that is defined as a too free flow at the time of the menstrual period? The excessive discharge here is not at the menstrual periods; or, at least, is not confined to them. What woman ever really menstruates every two weeks? Yet this patient has a uterine hemorrhage regularly at this interval.

There is not unfrequently a certain periodicity about such hemorrhages, as in the present instance, which is analogous to the periodical epistaxis from which some individuals suffer; and one writer has suggested that it should be called *metrostaxis*.

Metrorrhagia, then, is one of the symptoms of which the patient complains. Violent pain is another, and dyspareunia is a third. These are the most prominent ones, and they are all due to some abnormal condition referable to the pelvic organs. There are plenty of other symptoms present in the case; but they are of minor importance, and we need not concern ourselves about them just now.

The examination *per vaginam* is a very striking one in this case; and, curiously enough, the condition which I detected on making it is exactly represented, as regards the size and shape of the uterus, by this manikin uterus which I show you. You see there an interstitial fibroid, as large as an egg, in the anterior portion of the uterus. No doubt you will remember that when I was speaking recently of the various causes of dyspareunia, I mentioned sensitive fibroid among them. I would not have you forget, however, that, as a general rule, fibroids are not at all tender. But there are occasional exceptions, of which this is one; and I will now explain to you why this is so. When I first inserted my finger into the vagina, I was not able to reach the os uteri at all, and did not succeed until I had introduced two fingers, by which means I was enabled to get further up. I then found that the cervix, which pointed backward, was so firmly fixed that it was altogether immovable; and the effort to draw it forward caused the patient excessive pain. Again, when I resorted to conjoined manipulation, the pressure upon the uterus occasioned her such agony that she almost jumped off of the table. I was quite at a loss how to account for this state of affairs until I had heard the history of the acute inflammatory attack which has been mentioned as having occurred a year ago, and then the whole thing was perfectly clear to my mind.

You remember that the patient told us that her medical attendant apprehended an abscess about the womb, and that when she went into the hospital the surgeons there thought seriously of opening the so-called abscess; perhaps they had become converts to the new doctrine, which now seems to be getting quite extensively circulated, viz., that whenever the presence of pus is detected in any part of the pelvis, you should endeavor to evacuate it. I feel very sure that if, with this design in view, you go probing around the pelvis in search of pus, you will be exceedingly apt to get yourself into such difficulties that you will regret very sincerely having ever adopted any such rule. I do not wish to be misunderstood on this point, however; for, of course, there are many cases in which it is not only justifiable, but imperatively necessary, to open pelvic abscesses; but in every instance we should be guided by the peculiar circumstances of the case.

Well, what occurred at the time of the acute attack a twelvemonth since? The patient undoubtedly suffered from pelvic cellulitis or peritonitis, or perhaps both. The attending physician was no doubt right in apprehending an abscess; but the affection did not progress to the third stage. Now the fibroid was undoubtedly the cause of the attack. At this time it had probably been growing for a considerable period, and at length its increasing weight gradually caused anteversion of the uterus, and gave rise to so much irritation in the pelvis that the above serious results followed. But why this bearing-down pain of which the patient complains? Because the system is offended by the malposition of the uterus. On account of this and the pressure of the fibroid, the organ is kept constantly in a state of marked congestion, the engorgement, of course, being increased at the menstrual periods; and hence the metrorrhagia which is so prominent a symptom of the case. As I have said, this is a fibroid of the interstitial variety. That from

which the last patient was suffering was undoubtedly of the same character originally. Being situated nearer the mucous than the serous lining of the uterus, it was gradually forced into the cavity of the latter by the contractile efforts of the organ, and finally was driven completely out of the cervix, when it became a fibrous polypus.

In regard to treatment, I may remark, in the first place, that absolutely nothing should be done in the way of local measures. It would be utterly useless; and if the woman were the private patient of any one of you, the best result that could possibly follow from such a physical examination as has now been made would be for you to find that you know sufficiently about her case to keep your hands off of her, and let her alone entirely. If you should not have learned this from your examination, you would be a very dangerous medical attendant for her. As it is, I feel quite sure that one of the principal dangers to which she is exposed is from some of the various physicians whom she will be apt to consult because we are able to do so little for her. Perhaps you may ask, "Is nothing to be done for a woman who is suffering as she is?" Yes, I would reply, a good deal in the way of general management, but that is absolutely all; for any local treatment whatever would be extremely hazardous in this case. Indeed, I would not care to repeat even such an examination as I have made, for fear of lighting up anew some inflammatory trouble in the pelvis. I would recommend that the patient should have complete rest in bed, not only at the menstrual periods, but at all other times when there seems to be a tendency to hemorrhage; while at the same time she should avoid warm drinks and everything else that has any effect in the way of inducing it. She should also take the ordinary astringent remedies, such as tannic acid, the acetate of lead, and sulphuric acid; and it will be found, as a result of this treatment, that her system will be greatly recuperated by the controlling of the hemorrhage.

Furthermore, in order to repair the ravages made by the drain upon her strength, she should have a very nutritious diet and take certain tonics, though carefully avoiding iron and quinine. I am pretty sure that if I were to call upon those present to prescribe for this patient, twenty-five per cent. of you, at least, would order these two remedies. It is not very long since I had occasion to speak of this point before; but I deem it one of such great practical importance that I do not think any apology is necessary for alluding to it again. Acting upon the views which I now hold, and which are based strictly on experience, I should certainly say, give her quinine and iron, if it is desirable to increase the menstrual discharge, but not otherwise. It is true that she really needs both drugs for the building up of her system. But quinine has a distinct action upon the uterus, which entitles it to a place upon our list of parturifacients. Not that I believe that it originates uterine contraction *de novo*, and is, therefore, capable of bringing on abortion when administered to pregnant women, but I am quite sure that when the uterus has once commenced to contract, that action is materially increased by quinine. Then, on the other hand, iron is one of our best emmenagogues; and I have over and over again seen the most happy results from the exhibition of these two remedies in combination in cases of amenorrhœa. But there are plenty of other good tonics besides these; and so we are able to dispense with them. Finally, on account of the excessive pain which the patient suffers from intercourse, she should remain altogether *absque marito*.

SUBPERITONEAL FIBROIDS.

The last patient who will engage our attention today is Mrs. Ann F., a native of Germany, and forty-four years of age. She has had eight children, but no miscarriages, and has been a widow for the last ten years. By a very few questions we shall be able to get from the patient all the history that it is requisite for us to obtain in the case. How long have you been complaining, Mrs. F.? Answer: "Five years." What was the first thing that you noticed? "Pain on the right side, pretty low down." Was it very severe? "Not very." Do you have it up to the present time? "Sometimes." Is there anything else that troubles you? "Cramps in the bowels occasionally." Anything else? "I have been growing larger all the time." Is this enlargement greater on one side than on the other? "Yes, on the right side." Do you have your monthly periods regularly? "Yes." You see, gentlemen, that the patient looks like a perfectly healthy person, though she has the appearance of a woman at about the eighth month of utero-gestation. The latter fact is due to the presence in the abdomen of a multilobar tumor twice as large as one's head. It is not solitary, however, for there is another one below it of the size of a cocoanut, and still others again beside that; and I find that they are all connected with the uterus. A vaginal examination shows that there is a very large mass rising from the anterior surface of the uterus, and connected with it are two or three smaller tumors, about the size of ducks' eggs, while the sound is found to pass seven and a half inches into the cavity of the uterus. Is there any doubt about the diagnosis in this case? Not the slightest. These tumors are almost like masses of ivory, there being no part of any of them where there is any suspicion of fluid. In such cases, however, there very often is, and then we have to resort to the aspirator as a means of diagnosis. But why might not these fibroids be a solid tumor of the ovary? In the first place, such tumors are exceedingly rare, and some specimens which may be seen in museums so labelled are in reality only uterine tumors, the ovary having altogether disappeared on account of the pressure exerted upon it. But there is such a thing, notwithstanding, and I have seen one case of it myself—the tumor weighing some ten or twelve pounds. Secondly, because the sound passes seven and a half inches into the cavity of the uterus; while if it were an ovarian tumor, the cavity would probably measure only two and a half or three inches. Then, another collateral proof can be obtained by rocking the uterus backward and forward, by means of the sound, when it is found that the whole mass moves with it. This is not a conclusive test, but, taken in connection with the other points, is of very considerable value as corroborative evidence.

Now what has been the history of this case? These tumors originally became developed in the parenchyma of the uterus, near its peritoneal surface, and were no doubt, at an early period, extruded and forced up under the peritoneum. They are unattended with hemorrhage, because they are neither submucous nor interstitial in character. By a strange coincidence I have been enabled to show you to-day all three of the varieties of fibroid tumor: the submucous (which in the case that you saw had become a fibrous polypus), the interstitial, and now the subserous or subperitoneal.

The prognosis in this particular case is altogether most favorable, unless the patient should happen to fall into the hands of some one who would be rash

enough to attempt to remove the fibroids by operation. If this were done here, the chances are all that the uterus would have to come out also, and that the patient would almost certainly die within twenty-four or forty-eight hours; so that, under the present circumstances, I should consider such a procedure as positively criminal. But perhaps you may ask me if I would let this woman die rather than undertake such an operation. Certainly not. If her life were in danger, and I thought that by so doing I could give her a better chance of surviving, I would extirpate both the uterus and ovaries. But there is no such danger here, nor is there likely to be.

If the case is not interfered with in this way, I do not see why our patient should not live to an advanced age. She has no menorrhagia or metrorrhagia, and is, no doubt, quite as healthy as you or I. It is true that she has a somewhat uncomfortable weight to carry around upon her person; but an important thing to remember in connection with this case is that the menopause will probably soon occur. Have you ever reflected upon the fact that these tumors receive their nourishment through the uterus alone, sustaining, in this respect, the same relation to it that the mistletoe does to the oak? After the menopause, the uterus will become a very insignificant organ, shrinking so much that its cavity, instead of measuring seven and a half inches, will be only two and a half inches, or even less, in depth. These tumors necessarily, therefore, will also become more or less shrivelled, and it is altogether probable that some of them may undergo calcareous degeneration.

If, before the change of life occurs, they should grow very rapidly, and give rise to trouble which does not now exist, it might possibly be necessary to operate; but such a turn of affairs is exceedingly unlikely to take place. Occasionally, such growths become so large that it is absolutely necessary to remove them. Some time ago a poor woman came under my care who was suffering from a fibroid which weighed no less than fifty pounds. She was extremely anxious to have the tumor removed, but I acquainted her with the extreme danger that would attend the operation, and strongly urged her not to have anything done to it. At the end of a year she came back again, and the tumor had now increased to so great an extent that I admitted the patient to my service at the Woman's Hospital. On a consultation with my colleagues there, I found that they were all in favor of the operation, and, under the circumstances (especially as the woman was more desirous than ever to have it done), I was perfectly willing to undertake it. The tumor was excised quite readily; but in about forty-eight hours afterward, as is not unfrequently the case when the uterus is removed, the patient died. I would have you understand, therefore, that I do not hesitate in the slightest to operate in any case in which I think the patient's chances would be better under the knife than if she were let alone.

The medical man who has been attending the case tells me that in his opinion the fibroids have not increased very much in size during the past year. If the patient were younger, I certainly would not be willing to talk so confidently in regard to the case; but the menopause cannot now be far distant, and when that occurs, there will be little danger of any further trouble. Not that the fibrous masses will disappear as a result of that. They will still remain, but they must necessarily become greatly diminished in size. The only indication for treatment at present, then, is to keep the patient's general system in the best possible condition; and here is a case in which iron and quinine can, no doubt, be given with great benefit. There is no hemorrhage now, nor are these remedies at all likely to give rise to any. A person whose bowels are in a healthy condition can drink beef-tea with impunity, but if there is diarrhœa present, it would be greatly aggravated by it; and the action of the quinine and iron upon the uterus is somewhat analogous. In conclusion, we find that the patient herself is, very sensibly, opposed to having any operation performed.

THE TRANSFUSION OF BLOOD AND THE INTRAVENOUS INJECTION OF MILK.

A LECTURE DELIVERED BEFORE THE MEDICAL CLASS OF JEFFERSON MEDICAL COLLEGE.

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(Reported for THE MEDICAL RECORD.)

THE TRANSFUSION OF BLOOD.

I WISH first to call your attention to-day to an operation which some of you will no doubt be occasionally called upon to perform, and which has long attracted and still continues to attract the attention of the profession. I propose to tell you how and when to perform this operation, and to show you the implements necessary for its performance.

There are, as you all know, many conditions in which men and women lose so much blood as to become exsanguine, and be in danger of dying from its loss. When in this condition the only means at his power which the surgeon has of putting the vital fluid back into the system of his patient is by its transfusion from the veins of a healthy person.

In my estimation, the reason why the operation has always been so unsuccessful has been because it has invariably been performed too late. It should be done early, and before the patient is in a moribund condition.

In what cases should it be done? you will perhaps inquire. The diseases and states of the system in which the operation is demanded are many in number. Among these may be mentioned anæmia and chlorosis, gastric ulcer, post-partum hemorrhage, typhoid fever, puerperal fever—any disease, in fact, in which there is no organic circulatory lesion, but simply a mechanical loss of blood.

How is the operation to be performed? The blood must be drawn from the veins of some one who volunteers to provide it, and then, after due preparation, it must be injected into the veins of the sick person. When we think of the physical and chemical characters of the blood, we see at once how careful this preparation must be. If clots form in the injected blood there is great danger of embolism. The admittance of air into the veins is equally dangerous. I remember one case in my practice when death was instantaneous from the admittance of air. I intend to show you how to avoid the formation of clots and how to keep out the air.

The operation of transfusion is one in which an assistant is absolutely necessary. This assistant must be adroit, must be well acquainted with the phenomena of coagulation, and must attend altogether to drawing the blood from the person offering himself for that purpose and to the preparation of the blood thus drawn for the use of the surgeon.

Suppose, then, that I am called to perform transfu-

sion in a case of intestinal or gastric ulcer, where a large amount of blood has been lost. I take with me an assistant whom I can thoroughly trust. He attends to the donor of the blood and I to the patient.

First, then, as to the withdrawal of blood from the donor. The drawing of blood is one of the rarest of operations nowadays. In old times it was very common. Blood is usually taken from the left arm, as the right arm is used more than the left. The vein from which the blood is taken is either the median cephalic or basilic. As a rule the median cephalic is chosen. My rule is to bleed wherever a large vein can be found, no matter what vein that one may be. Before opening the vein I take a fillet and tie it around the arm just above the point of incision. I give a stick to the donor to hold in his hand and tell him to keep his fingers in continual motion, opening and shutting them upon the stick. This brings all the muscles of the forearm into play and so causes an increased flow of blood to the parts.

Do any of you know the origin of the red and white barber's pole? It is nothing but the bleeder's stick. In old times barbers attended to many points of treatment which nowadays come within the sphere of the surgeon. Among other things they were in the habit of bleeding, cupping, etc., and so the bleeders' red and white pole has come down to us as a symbol of the "tonsorial art," as its professors are pleased to call it.

In opening a vein I generally use a lancet, or rather my assistant uses one. All the blood which is the result of the bleeding must be received in a proper vessel. A great many vessels have been designed for this purpose, but I think that the simplest implements are always the best. I know that most hospitals are provided with a most complicated vehicle for the reception of the blood and the maintenance of its temperature, but I have devised a very simple vessel for use in my private practice. This is a common tin pan with an opening above, *i. e.*, a spout, and a vent below. On one side it has a little slide in which an ordinary thermometer is placed. Inside of the pan are two closed funnel-shaped vessels fitting into each other and provided with lips. The pan is filled with water at 116° F. From repeated experiments made I know that any blood drawn into the inside funnel-shaped vessel in this pan containing water at 116° F. will be kept at a temperature of 98°. Before using any part of the apparatus, however, I soak it all in water raised to 116° F. The spout and vent are very useful to me, for if the temperature is too high I can draw out some of the hot water by means of the vent and pour in some cold water through the spout. Beside the assistant, who draws and whips the blood, another assistant is always necessary to keep an eye on the thermometer in the pan and see that the mercury is kept steadily at 116° F. As common thermometers vary, the one used should be tried before the time of operation.

What kind of an opening is to be made in the vein of the patient who is to donate the blood? A good, large, oblique opening should be made so that the blood may flow rapidly. As some five or six ounces of blood, at least, must be drawn, we do not want the donor to faint, and so we make him sit down while the blood is flowing and administer restoratives at the first sign of syncope.

We will suppose, then, that some six ounces of blood have been drawn by the assistant. The fibrin must be removed from this blood. How is this to be done? The best thing for the purpose of whipping the fibrin out of the blood is a well-cleaned and neatly tied up bunch of broom. Some physicians use regular egg-beaters for this purpose, but as several beaters are necessary I think the broom much more handy. All the while that the blood is being drawn the assistant keeps stirring it. When he raises one bunch of broom out of the vessel and finds it covered with strings of fibrin he throws it aside and takes another. The broom I use is carefully boiled and dried beforehand.

When enough blood has been drawn all that is necessary to do for the donor is to lay a plug of lint over the vein, pass several turns of a roller about the arm, administer a little brandy and water, and put him to bed.

But the blood which has been thoroughly beaten up still contains air in it. To get rid of this air it is necessary to strain the blood through a fine damask napkin. Here is where the outer funnel-shaped vessel is of value. A damask napkin is stretched over its brim and the blood from the other vessel strained through it.

The blood thus whipped and strained has lost its bright color; is dark in appearance, but still perfectly fluid. All the work thus far has been done by assistants. In the meanwhile I have been opening a vein in the recipient's arm and putting in a tube. There is no difficulty in finding a vein in the living subject except when the patient is unusually bloodless. I have a tube for injecting blood given me by O'Connoll, of Dublin. This tube has its eye on the top instead of at the end. This is very useful in some cases, but I generally employ a canula attached by rubber tubing to a syringe. This syringe, which I show you, was chosen by me from a lot of Viennese syringes, and is a most reliable implement. It holds just four ounces. Before using it the syringe must, of course, be dipped in water at a temperature of 116° F. so that it may keep the blood continued in it at 98° F.

After inserting the tube into the vein I am accustomed to tie it in position. This is done by passing a thread beneath the vein. Before putting the tube into the vein care must be had to see that the two currents of blood touch each other exactly and that no bubble of air intervenes. After the tube has been tied in the vein pressure may be slowly instituted on the handle of the syringe and the blood gradually forced into the circulation. During this procedure the patient's face must be carefully watched and the opposite pulse held by the trained assistant. The blood should always be thrown in very slowly. The funnel-shaped pan containing the blood ought to be properly graduated so that we may know exactly how much blood we are using. After the blood has been injected the ligature round the vein must be cut and the tube withdrawn. A plug of lint should then be placed over the wound and gentle compression instituted.

THE INTRAVENOUS INJECTION OF MILK.

In consequence of the great percentage of deaths in general practice from the effects of the transfusion of blood a new operation has of late years been proposed—that of the intravenous injection of milk. Thus far only about twelve cases, where milk was injected into the veins, have been put on record; of these three were performed by Dr. Edward M. Hodder, of Montreal; two by Dr. Joseph W. Howe, of New York; three by Dr. T. Gaillard Thomas, of New York, and four by Dr. Charles T. Hunter, of this city.

The advantages claimed for milk which show it to be a fluid more fit for intravenous injection than blood are that there is no danger of coagulation, and none of

the passage of air. Moreover, milk is more allied to chyle, the material of which nature makes blood, than any other fluid with which we are acquainted. We all know that chyle from the *receptaculum chyli* empties directly into the left subclavian vein after passing through the thoracic duct. This chyle, upon its entrance into the blood, is a whitish, oily, milky-looking fluid. Chyle is claimed by Dr. T. Gaillard Thomas (*The Intravenous Injection of Milk as a Substitute for the Transfusion of Blood.* Illustrated by seven operations. By Dr. T. G. Thomas. Reprinted from the *New York Medical Journal*, May, 1878. D. Appleton & Co., N. Y.), to be not very unlike milk in its composition. "Chyle," says he, "is fat in emulsion in a serous fluid. Milk is fat molecularly divided and suspended in water with casein and sugar." The objections which have been raised to the use of milk are that "the casein will cause obstructions in the small arteries; and that the emunctories, in endeavoring to eliminate it, will be overwhelmed by congestion." These objections Dr. Thomas answers by showing how nearly similar in their constitution milk and chyle are.

The kind of milk which is generally used is the milk of the cow, although, in a very celebrated case of intravenous injection of milk which occurred recently in this city, the milk injected was that of a goat, which was brought into the pantry of the house where the patient was lying, and milked there. In one of Dr. Joseph W. Howe's cases also goat's milk was used. The results thus obtained from the intravenous injection of milk have been moderately good, much better certainly than those obtained in surgical practice thus far by the transfusion of blood. Two of Dr. Hodder's, one of Dr. Howe's, two of Dr. Thomas's, and one of Dr. Hunter's cases were followed by very marked improvement. That is to say that out of the eleven cases in all already published, six have been successful, *i.e.*, have been followed by marked improvement. Indeed, the fact seems to be that, had the injection only been made earlier in those cases where bad results followed, its effects might have been most excellent. In one of Dr. Hunter's cases —one of hemorrhage from the bowels as a result of typhoid fever—the patient rallied most wonderfully after each operation, and was only carried off at last by a most copious and draining hemorrhage. In one of Dr. Howe's cases the milk had been carried from such a distance as to be slightly decomposed before injection; hence the fatal result. According to Dr. Thomas, Dr. Eugene Dupuy, of New York, has shown that the intravenous injection of decomposed milk into dogs is uniformly fatal; whereas the same experiment, if practised with perfectly pure and fresh milk, is entirely innocuous. In the other fatal case of Dr. Hunter's—one of Addison's disease—the operation was only attempted as *un dernier ressort*.

Dr. Thomas sums up the results of his operations as follows:

1. That the injection of milk in place of blood is perfectly feasible and safe.

2. That none but milk removed from a healthy cow within a few minutes of the time of injection should be used.

3. That the intravenous injection of milk is infinitely easier than the transfusion of blood.

4. That the injection of milk, like the transfusion of blood, is commonly followed by a chill, and a rapid and marked rise of temperature.

5. That not more than eight ounces should be injected at one operation.

6. That lacteal injections should not be limited to cases prostrated by hemorrhage, but should be employed in disorders which greatly depreciate the blood, such as Asiatic cholera, pernicious anæmia, typhoid fever, etc., and as a substitute for diseased blood in certain affections which immediately call for the free use of the lancet—such as puerperal convulsions, etc.

In performing the operation for the intravenous injection of milk certain simple forms of apparatus are necessary. Dr. Thomas uses a glass funnel, having attached to it a piece of India-rubber tubing, with a very small canula at its extremity. The injections were always made into either the median basilic or cephalic vein of the left arm. Dr. Charles T. Hunter, who has performed the operation of transfusion several times, and has recently had the three cases of milk injection to which reference has already been made, uses a form of apparatus slightly different from that of Dr. Thomas. Dr. Hunter, instead of a glass funnel, employs one of brass; his canula is only from one-twelfth to one-eighteenth of an inch in diameter, being smaller in calibre than the cephalic vein itself, and is connected with the funnel by means of a piece of rubber tubing two feet in length and about one-sixth of an inch in diameter. His canula is silver-plated, provided with a carefully constructed stop-cock, and ends in a very fine point. Dr. Hunter does not pierce the vein through intervening skin and tissues, but makes an incision about one-half an inch long over the course of the vein, dissects the vein away from the surrounding tissues, raises it on a grooved director, and then plunges the canula directly into it. He does not consider it necessary to tie the canula in position, but thinks that it is amply constricted by the wall of the vein.

He always strains the milk before injection. The question has frequently been raised as to whether the effects following the intravenous injection of milk are not due entirely to the presence of a stimulating liquid in the blood and its action on the walls of the heart; whether it can, therefore, be said to do anything more than merely tide the system over a state of marked depression—whether, in fact, the result obtained is any other than that produced in certain cases of epidemic Asiatic cholera by the injection of simple salt and water into the circulating fluid of the body. This is a point which has not yet been definitely settled.

With regard to the evident obstruction to respiration immediately following the injection in many instances, and the presence of marked albuminuria, all that I can say to you is that the pulmonary obstruction is said by some to be produced by the formation of casein in the arteries of the lungs, and that the albuminuria which follows the transfusion of blood as well as the intravenous injection of milk, may be produced by the simple ingestion of unusually large quantities of the white of egg.

THE INTRAVENOUS INJECTION OF MILK LIKELY TO SUPERSEDE THE TRANSFUSION OF BLOOD.

As far as my own practice is concerned, I think that, in future, I shall try the intravenous injection of milk in preference to the transfusion of blood. I have transfused a great many patients of late years, both in private and hospital practice, and my results have been very far from reassuring. I think the proposed intravenous injection of milk offers us much better results, judging from the cases published by Dr. Thomas and those in this city. The main obstacle to complete cure, as I have already said, thus far has been the very late period of the disease at which the injection has been attempted. Though the exact

rationale of the action of milk, thus introduced, upon the system has not been satisfactorily shown, I think this new operation will, in a few years, have entirely superseded the transfusion of blood, which latter operation is even now being rejected as at once dangerous and unavailing in many parts of the country, and by many surgeons of authority and deserved eminence in their profession.

Original Communications.

LIGATION OF THE LINGUAL ARTERIES BETWEEN THE EXTERNAL CAROTID AND POSTERIOR BORDER OF THE HYO-GLOSSUS—EXTIRPATION OF THE TONGUE FOR EPITHELIOMA.

By JOSEPH W. HOWE, M.D.,

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JOHN DEAN, æt. 70, occupation, harness-maker, was admitted to St. Francis' Hospital, September 17th, 1878, suffering from an epithelioma of the tongue. The disease commenced eight months previous to admission as a small fissure or ulcer on the left side of the tongue near the lip. It spread rapidly in depth and in circumference, and was accompanied by pain and difficulty in mastication and deglutition. An examination showed that a large, deep, and irregularly excavated ulcer occupied the left side of the tongue, extending from its anterior extremity to within three-quarters of an inch of the insertion of the palato-glossus. The organ was swollen and very painful to the touch. Large quantities of saliva mixed with pus flowed constantly from the mouth. The odor was extremely fetid, and very noticeable some distance from the patient.

The mouth was thoroughly cleansed with a strong solution of carbolic acid, and a nutritious liquid diet ordered.

A few days after admission it was seen that the disease was spreading rapidly, and had already involved the right side of the tongue, near the floor of the mouth, and undermined the greater portion of the left. There was every indication that the lingual artery and its branches would soon be involved in the destructive process, and that death would soon ensue from hemorrhage.

To prevent this accident it was decided to ligate the lingual arteries near their origin between the external carotid artery and the posterior border of the hyo-glossus muscle, in the manner proposed and successfully acted upon by Dr. George F. Shrady, of this city. (MEDICAL RECORD, Vol. XIV., page 204.)

I performed the operation on September 30th, assisted by Drs. Shrady, Ripley, and Stimson. An incision was first made on the left side of the neck parallel with the hyoid bone, extending from its anterior extremity to about an inch beyond the apex of the greater cornu. The artery was found just above and posterior to this point; a catgut ligature was applied and cut off close to the artery. The wound was then closed in in the usual manner.

A similar incision was made on the right side and carried down to the apex of the cornu. Here the artery was given off from the carotid, about the eighth of an inch higher than on the opposite side, and more dissection was necessary to expose the vessel. A catgut ligature was applied, and the wound closed. As the condition of the patient was good, it was decided to extend the operation and remove the tongue through the mouth. Accordingly, the organ was firmly held by means of a vulcellum, drawn out as far as possible, and its attachments in front and below cut with a blunt-pointed scissors.

This allowed the tongue to be drawn still further out of the mouth, and its root to be more readily reached. A stout ligature was then passed through the base of the tongue near the median line, and held by an assistant. The palato-glossi were then divided, and the tongue cut through at its base, and removed.

A piece of diseased tissue attached to the gum, at the symphisis, and to the floor of the mouth, was also removed at the same time.

The operation was a *bloodless one* up to the time the anterior pillars of the fauces were cut through; then slight hemorrhage occurred, which was readily controlled with a piece of ice.

On the second day after the operation, the patient's temperature ran up to 103°. On the 4th, it ran down to 101°, and he was able to get out of bed and help himself to various articles in the room. His food, which was administered by means of a catheter inserted in the œsophagus, was retained, and he was comfortably free from pain. On Sunday, the 6th day after the operation, he remained up and attended to all his wants. The wounds in the neck were healing rapidly, and there was every prospect that he would make a good recovery. But on the morning of the 7th, he aroused the attendants by a loud cry. The latter ran to his bedside, and found that a large stream of blood was spurting from the posterior corner of the wound, on the right side of the neck. He was unable to control it, and death resulted in three or four minutes from the hemorrhage.

A post-mortem examination showed that the lingual artery on the right side had sloughed from its point of origin, at the external carotid to a couple of lines beyond the point, where the ligature was attached. On the left side the ligature was intact, and a firm clot filled the lingual artery on both sides of the ligature, and extended about the eighth of an inch into the external carotid artery.

Remarks.—There was no disease in the neighborhood of the ligated artery, which would account for the secondary hemorrhage. The artery was ligated at a sufficient distance from the carotid to insure the formation of a clot. There was no calcification or atheromatous degeneration of the vessels on that side of the neck. In my opinion, the secondary hemorrhage was due, for the most part, to the extra amount of dissection, which was made in exposing the artery on that side, and which probably cut off the blood-supply to the walls of the blood-vessel. In a younger person, the destruction of cellular tissue around the artery to the same amount would have been unattended by evil consequences; but in an old man, whose nutrition was much below par, little was needed to cause necrosis of tissue anywhere.

As before remarked, the operation was a bloodless one. The tongue was cut away with as much ease, and with as little hemorrhage as if removed from a cadaver.

There was no shock following the operation, and every point in connection with the case showed that the ligation of the arteries near their origin was a justifiable, preparatory step towards extirpation of the diseased organ.

PECULIAR AND UNUSUAL SYMPTOMS OF HAY-FEVER.

By GEORGE M. BEARD, M.D.,

NEW YORK.

I HAVE been much interested in the discussion between Dr. Edson and Dr. Wey on "Paralysis of the Diaphragm *vs.* Hay-fever." It seems to me that Dr. Wey, who is not only one of the best physicians in the country, but, as I have reason to know from various correspondence and conversation with him on the subject, has given much thought and attention to hay-fever, is probably quite right in his suggestion that the case reported by Dr. Edson represents a peculiar and unusual symptom of that disease.

Those who thoroughly understand the nerve theory of hay-fever, as it has been presented not only in my own writings, but, still more recently, in Dr. Barbour's Report to the United States Hay-fever Association for last year, are prepared for the discovery of almost any conceivable manifestation of this wonderful malady; new symptoms or phases of symptoms are springing into view constantly.

When we once fully grasp the fact clearly and accurately stated by Dr. Barbour—that hay-fever is a *subjective*, not an objective disorder, coming from *within*, not from without, the numerous and nameless exciting causes being only of secondary or tertiary importance—we cease to be surprised at any new or previously unnoticed trick, or device, or form that it may exhibit. In the family of neuroses, to which hay-fever belongs, nothing can surprise, nothing is anomalous, nothing is inconsistent; with the evolution of the modern constitution, new shapes and type of symptoms are every year coming under observation.

Although I have now seen, or studied, in more or less detail, over five hundred cases of hay-fever in its early, middle, later, and winter forms, and therefore might well be supposed to have become familiar with every possible phase and type of the malady, yet every season novel, unexpected, and unimagined caprices in its history and symptoms are brought to my attention.

Dr. Edson, first of all, mistakes in assuming that in hay-fever such symptoms as coryza, persistent sneezing, sensitiveness of the nasal mucous membrane, cough, asthma, photophobia are necessarily present; some of these symptoms, or all of them, are usually found in hay-fever of the regular type, but no one is essential to the disease. Just as in writers' cramp—a disease that I am now specially investigating—there are many cases that do not have the characteristic cramp, just as there may be sick headache without the usual nausea and vomiting, just as we may have locomotor ataxy without the ataxic gait, just as there may be hysteria without hysterical convulsions, just so there may be genuine hay-fever without any of the familiar symptoms in the nasal and respiratory tract.

Let me briefly present a few of the apparent anomalies of hay-fever that can readily be brought to my remembrance.

I saw this summer, with Dr. Sterling, a case where hay-fever was apparently confined to the eyes. The attack of conjunctivitis came on quite suddenly in *one* eye, on a warm day, while in a boat on inland waters. Three successive summers he has been attacked in the same way, and, I believe, under similar circumstances. He is very much worse at night; the usual treatment employed by ophthalmologists did little good. Under local and central galvanization he was rapidly relieved. At no time, so far as I could learn, were there any other symptoms that suggested hay-fever.

In my treatise on Hay-fever there is recorded a case of a man who, during the regular season for the later form, or "autumnal catarrh," has an eczematous eruption on the face. For many years this eruption has appeared between the 20th and 25th of August, and has disappeared with cool weather. When temporarily suppressed by treatment, a severe attack of asthma at once takes its place. He has no nasal symptoms.

This very season I have seen a hay-fever case in whom the usual symptoms are always preceded by the appearance of a small patch of eczema on the neck.

I have also seen a case where spasm of the œsophagus was one of the symptoms, making it difficult to swallow anything but liquids. This year a case was for a time under my observation where attacks of aphonia appeared now and then during the course of the disease.

This season I have seen a gentleman of intelligence whose attacks are preceded, for two or three days, by profound mental depression, during which immense quantities of alcohol can be taken without any apparent effect; at other times he can drink but little.

Dr. Edson is right in asserting that hay-fever is less common South than North, and yet the disease *does exist all through the Gulf States.* I have seen or have had reports of scores of cases in the South—some of them members of our own profession—and these Southern cases are sometimes very severe. Like all the nerve maladies of the family to which it belongs, hay-fever is far most common in the North, and regularly decreases in frequency as we go South; like these diseases, also a-not-to-be-overlooked minority of cases are indigenous in all the Southern States.

In regard to the case cited by Dr. Wey, there can be no question that it was genuine hay-fever, the difficulty of breathing being there associated with more familiar symptoms. It will be interesting to watch the case reported by Dr. Edson in order to see whether in subsequent years he has similar attacks on exposure to the heat, and also whether other symptoms do not in time appear. It would seem furthermore that there was a spasmodic rather than a paralytic condition, and the results of the treatment by chloral is, so far forth, in harmony with this view. For several years I have been accustomed to recommend chloral, either alone or in combination with the bromides, for the various symptoms of hay-fever.

In closing, I may express satisfaction that physicians are beginning to devote to hay-fever that scientific attention which, as one of the most interesting and instructive nervous diseases of modern times, it surely deserves.

CONSERVATIVE SURGERY.—Dr. Borlée claims that a simple dressing of charpie and compresses wet with spirits of camphor, in connection with thorough drainage, deserves the preference over Lister's method. With this dressing erysipelas scarcely ever occurred, the suppuration, even when the wounds were extensive, was slight, and the secretion did not become offensive. He illustrates the method by the histories of eight cases, comprising one case of "loose cartilage" in the knee-joint, removed by excision, with perfect recovery, two cases of severe, complicated fracture of the leg, an amputation and an exarticulation of the upper extremity, and extirpation of tumors.—*Centralblatt f. Chirurgie.*

Progress of Medical Science.

Subcutaneous Division of the Neck of the Thigh-bone.—Mr. Adams, F.R.C.S., exhibited to the British Medical Association the man upon whom he first performed the operation of subcutaneous division of the thigh-bone in 1869, when the patient was twenty-four years of age, at the great Northern Hospital. As a result of the operation, bony ankylosis took place, and the limb soon became strong and useful. He has since remained well and able to walk several miles without fatigue, and to carry weights. The progress of this operation has been from time to time recorded in these columns, but Dr. Adams has collected and analyzed all the cases reported. The total number of cases operated upon amounted to thirty-three, and Mr. Adams had not heard of any unfavorable cases beyond those recorded in the earlier paper, of which one was fatal from pyæmia, and in two others deep suppuration contributed to a fatal termination after many months. As a general rule, the wounds had healed like tenotomy wounds, without any suppuration or local disturbance. In some cases a little suppuration at the wound had occurred, but only in a few cases had deep suppuration taken place; much of the success depending upon a judicious selection of cases, and great attention to the minute details of the operation.—*The British Medical Journal*, August 24, 1878.

Removal of the Astragalus in the Adult in a Case of Congenital Talipes.—Mr. Lund read before the British Medical Association a report of the following case: The patient, a factory operative, tall and well grown, now twenty-nine years of age, had been the subject of talipes equino-varus on the right side from birth. No systematic treatment had been employed, and, as was shown by a cast of the limb, the foot had been inverted and crumpled up to a considerable extent. Yet he was able to walk about and attend to his work until about a year since, when an ulcer following a large corn on the outer border of the foot on which he rested had completely disabled him. Mr. Lund described how, when he had determined to try to correct the deformity by removal of the astragalus, he proceeded on the same plan as that described by him at the Birmingham meeting of the Association in 1872, and made one long, straight incision on the dorsal surface of the foot between the outermost tendon of the extensor longus digitorum and the tendon of the peroneus tertius. But in this instance it was found that instead of coming down upon the projecting head of the astragalus covered by the dorsal ligaments, it was the upper surface of the bone —that which had been placed between the malleoli— which then presented itself; and this was caused by the still persistent infantile form of the astragalus, as described by Mr. William Adams in his work on *Club-foot*, and the fact that there had been partial ankylosis of the astragalus and scaphoid. The latter bone had been so drawn upward, backward, and inward by muscular action, as to dislocate the astragalus from the intermalleolar space and leave it fixed on the dorsal aspect of the foot. The astragalus was extracted by the curved hook previously described; and the present state of the foot, as seen in a cast taken fourteen weeks afterward, showed that a very hopeful result would follow the operation.—*The British Medical Journal*, August 24, 1878.

Removal of the Astragalus, Scaphoid, and Cuboid Bones.—Mr. West presented at the meeting of the British Medical Association a paper on this subject, relating a case in which he performed this operation. The case was one of aggravated talipes equino-varus in a woman aged 23, on whom Mr. West operated by the plan suggested by Mr. Richard Davy, of the Westminster Hospital. Models of the limb taken before and subsequently to the operation, and also the tarsal bones, the cuboid, astragalus, and scaphoid, removed at the time of the operation (May 19, 1878), were shown. The result, as seen ten weeks after the operation, was eminently successful. Mr. West considered that, although tenotomy was the most suitable operation, in infants and young children, in adults, or in cases where tenotomy had been tried and failed, resection of a wedge-shaped portion of the tarsal bones was an excellent operation; and that in future no case of talipes, whatever might be the age of the patient or the severity of the deformity, need be looked upon as hopeless. The use of Esmarch's bandage, and the antiseptic method of subsequent treatment, in operative procedures of this kind, deprived them of the risks which such an interference with the tarsus and its numerous articulations would otherwise involve.—*The British Medical Journal*, August 24, 1878.

On the Treatment of Spinal Abscess.—In a recent clinical lecture on this subject, Dr. Samuel W. Gross stated that he has altogether discarded the theory that the entrance of air into the sac is the cause of the putrid changes in the pus and the fatal systemic disturbance, which so often follow the opening of spinal abscess. In accordance with this change in theory, he has also discarded the operations by valvular incision and by free incision with antiseptic precautions, both of which had uniformly been followed by bad results in his practice. He believes that the evil symptoms after operation must be ascribed to inflammation of the sac of the abscess, induced by the loss of support of its walls and the increased nutritive changes consequent on the increased blood-pressure. The sac of a spinal abscess being formed of a firm (pyogenic) membrane and the surrounding stretched and altered tissues, through which the pus has travelled in its efforts to reach the surface, its sides do not contract and fall together after evacuation. As a result of the tension of its vessels, due partly to the pressure of the accumulated pus, and partly to the infiltrated condition of its walls, its blood-supply before the evacuation is comparatively slight, and the formation of pus is a slow process. From the moment, however, that the circulation and nutrition of the cyst are disturbed by the withdrawal of its contents, from that moment the tension of the vessels is lost, and, as natural consequences, more blood is sent to the hitherto slightly vascular membrane, its surface becomes studded with minute granulations through the dilatation of the old capillaries and the development of new ones, and pyogenesis goes on at a greatly increased rate. So rapid indeed is the production of pus, that a day or two suffices for the abscess to attain dimensions which, in its closed state, were the work of months. After several evacuations, moreover, the pus becomes thin and somewhat putrid, and is streaked with blood from rupture of the softened capillaries.

In accord with this theory of inflammation of the sac as the cause of the consecutive fever after its evacuation, Dr. Gross holds that the essential elements of treatment are, first, to afford rest to the sac by supporting its walls, and, secondly, to tranquillize the system at large and control morbid action by the

free exhibition of anodynes. To fulfil the first indication, after a free incision, adhesive strips, about an inch in width, are applied over the empty sac in such a manner that each strip envelops one-half the preceding one, care being taken not to embrace the entire body or limb, as the case may be. An opening having been made in the dressing to admit of free drainage, a large, soft, moist sponge is confined over the parts by a couple of adhesive straps and a roller, and kept wet to promote its expansion. So long as the discharge is abundant the outer dressing will require a daily change, and during the first few days the adhesive strips will have to be changed every forty-eight hours. As soon as the granulating process has sufficiently advanced, as indicated by the marked diminution in the quantity and the alteration in the quality of the pus, the dressings may be discontinued. With a view to allay nervous and vascular excitement, and thereby more effectually secure rest to the parts and the system at large, opium is given in full doses for the first five or six days after the evacuation of the abscess. In conclusion, it should be stated that Prof. Gross does not claim originality for his theory, but merely advances it as the basis for a mode of treatment that has proved very successful in his practice.—*Medical News and Library*, July, 1878.

Two Cases of Disease of the Bladder Relieved by Somewhat Novel Operative Methods of Treatment.—The first of these cases, which are reported by Dr. William Alexander, was one of villous tumor of the bladder, which had existed for eight years without being recognized, although the patient had been under medical treatment repeatedly during that period. In 1868 her urine became red, thick, and scanty, without any apparent cause, and continued so for several months. A year afterward the symptoms recurred, this time accompanied by considerable pain in the vesical region, which was greatest during micturition, but was constantly present. Soon after small masses came away, exactly similar to those removed at the subsequent operation. From that time until 1876 the symptoms persisted with more or less severity, the general health at times suffering severely. In 1876 she consulted Dr. Alexander, who diagnosticated chronic cystitis, and subjected her for four months to various methods of general treatment, but without any lasting benefit. Finally he concluded to make a thorough examination, and on dilating the urethra and inserting his finger into the bladder, found the floor of that viscus covered with irregular growths of various heights. A few were as much as a quarter of an inch from base to apex, and one seemed to be nearly an inch in height. This large one had a rounded, bulbous apex; the apices of the others were thin and pointed. Small crystals could in several places be felt between the papillæ. A few days later the urethra was dilated with an anal speculum, and the largest growth removed by the écraseur. The tumor was cut through without any feeling of resistance, and in trying to get it out others were displaced from their place of growth by the movements of the finger. Acting on this hint, Dr. Alexander scraped off with his finger all the nodules within reach, and then washed out the bladder with a weak solution of perchloride of iron. During the operation the hemorrhage was not great, but the urine contained a good deal of blood for a week afterward. The patient scarcely suffered any constitutional disturbance. She had incontinence of urine for two days only, during which scraps of the tumor came away. The subsequent treatment consisted only in frequently washing out the bladder with weak solutions of carbolic or nitric acid or perchloride of iron. Four months after the operation the patient was able to resume her vocation as cook. In all, about two dozen small growths were removed and five or six were lost; microscopically they presented the appearances characteristic of villous growths. In consequence of the recurrence of the symptoms, the operation had to be repeated in October, 1877, and again in May of this year. The recovery after the last operation was more rapid and more perfect than on either of the previous occasions. The urine has continued clear ever since.

The second case was one of chronic cystitis, the result of stricture and enlarged prostate. As the stricture was of twenty years' standing and the canal of the urethra was hard, indurated, and tortuous at the junction of the spongy and membranous parts, it was treated by forcible dilatation with Holt's instrument. A large catheter was then passed, and the bladder was washed out, with much relief of the symptoms. Despite frequent washings, however, the catarrh continued, and as the passage of the instrument always caused severe pain and spasms, perineal section was finally resorted to. After the operation the patient felt much relieved, and for some time improved considerably in health and spirits, but died four months later of gradual emaciation and exhaustion. The autopsy revealed an enormously hypertrophied and deeply ulcerated bladder and advanced disease of the kidneys, the left one being reduced to a large cyst, the walls of which were formed by a thin layer of renal substance. After the last operation the bladder could be readily washed out through a perineal tube, the washings escaping by the urethra. —*The Lancet*, August 17th.

Disadvantages of Salicylic Acid as a Mouth-Wash.—Dr. Buch, of St. Petersburg, has found that even a very weak solution of salicylic acid is injurious to the teeth. After it has been used for some time, the teeth appear softer, and feel as if they were covered with some gritty substance. This is due to the acid combining with one or more of the constituents of the teeth, the surface of which becomes soft and granular. Dr. Buch believes that a salicylate of lime is formed, which adheres to the teeth, and is the cause of the peculiar sensation when they are rubbed together.—*Edinburgh Med. Journ.*

A Case of Renal Asthma.—Dr. Fairfax reports the following case: a woman, who was at the time nursing a child about two months old, suffered for several days from severe pain in the back of the neck, which was aggravated by sudden movements of the head, but was not attended by fever or headache. She was suddenly seized during the night with an attack of dyspnœa, and on the following morning the doctor found her sitting up in bed, with an anxious and livid countenance, and breathing like a person with a severe attack of asthma. On examination he discovered no signs of heart-disease, and found that the air had free access to both lungs, with the exception of the infra-scapular regions, where there was slight, fine crepitation. He noticed some œdema of the hands and face, however, and, on examining the urine, found that it contained albumen, casts, epithelium, and blood-globules; it was very scanty, and had a sp. gr. of only 1013. Concurrently with the establishment of free action of the kidneys and skin, which was effected in two or three days, the respiration became easy and natural, and the pain in the neck and the œdema diminished.—*Virginia Medical Monthly*, July.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE STUDY OF EPIDEMICS.

From various parts of the country reports come to us of the prevalence of fevers of low type and long continuance. In some localities a large proportion of the population is attacked, suggesting epidemic influences. That no special alarm is created in consequence of the comparatively widespread nature of the disease is perhaps due to the fact that as a rule the mortality is exceedingly small and that convalescence is rapid and satisfactory. Of course in searching for the supposed causes of such fevers we naturally think of defective drainage, impure drinking water, and of the other accessories with which these unsanitary conditions are conventionally associated. There is no doubt that in many instances in which such conditions are searched for they will be discovered and the usual pains will be taken to bolster up an argument in favor of some germ theory. There is nothing easier to prove on general principles than the relation of filth and other unsanitary surroundings to fevers and epidemics. The association of cause and effect appear to be very direct, and when a plausible doctrine is dovetailed with certain facts the conclusion seems almost irresistible. The danger at present, however, seems to be towards an extreme which may militate against an honest search after truth.

It is barely possible that, in spite of the general belief that bacteria are lurking everywhere, seeking whom they may devour, are dodging even under the knife of the surgeon, are spreading devastation everywhere—that they do not, after all, hold the balance of power between health and disease—in fact, that there may be other causes at work which we do not understand, and which may well repay investigation. This view of the subject will, we think, become more and more apparent as we attempt to investigate the laws of epidemics—as we strive to explain the reasons why, under apparently similar conditions, a disease is more virulent or more widespread in one place than in another. Filth, bad drainage, and bad water are very constant factors of fevers, but that they are not invariably present is an equally acknowledged fact. What are called unsanitary conditions unquestionably invite epidemics; but, when the latter are once established, their progress is beyond any reasonable explanation based upon any germ theory, cell doctrine, or the like. This has been, in a measure, demonstrated in the spread of the Southern pestilence, and gains additional strength of proof in the unusual tendencies towards fevers over wide ranges of country in the North. Although the fevers in the North have not assumed the dignity of real epidemics, and have not commanded the attention of the Associated Press, they are sufficiently prevalent to militate against the doctrine of local causes and to invite renewed investigations, having the widest possible range of application. It is so tempting to fix a suitable fact to a plausible theory, that there is no wonder a cursory examination of supposed causes has been sufficient with the majority, and that the profession has been tempted to accept conclusions which are not always capable of being substantiated.

What, for instance, is more gratifying than the explanation that the healing of wounds after the antiseptic method is due to the slaughter of bacteria by the spray? If we were not so strongly committed to the theory, there would be something ridiculous in the method of its demonstration, and due weight would be given to the fact that large wounds, wounds complicating important parts, have healed by first intention before the spray-kettle was thought of, and still continue to heal when carbolic vapor is not used. The exceptions to the general rule are sufficiently numerous to command attention. The same might be said in regard to the germ theory and other hobbies connected with the causation of fevers, and the spread of epidemics. Localities which were scrupulously cared for have been the abodes of fever during the summer and early fall; places in which every sanitary precaution has been taken have been visited by epidemics, and the physicians, who have studied the conditions of causation, have been more than puzzled to account for them in accordance with present and generally received opinions. Then again, on the contrary, insalubrious localities have escaped; and ill-ventilation, squalor, bad drainage, and indifferent water have failed to invite disease. These are certainly disheartening facts, but it seems to us that the time has come when they should be looked at fairly and with the single desire of interpreting them in a thoroughly unprejudiced manner. The material for new investigations is at hand, not only in the South, but throughout the North; and the time seems to have arrived when they should be made. Naturally we may look for the initiative in this matter in the work of the present Yellow Fever Commission. If the study of the facts

is made from a thoroughly independent standpoint, we shall have made a start in the right direction, a departure which may be as promising in its results as any hitherto made, and may eventually lead to the reconciliation of apparently conflicting views. In order to fulfil their conditions, however, no man with a hobby should be trusted on any commission of investigation. It is not to such men that we must look for practical facts, or for impartial statements.

THE DETERMINATION OF SEX IN UTERO.

In a recent number of the *Boston Medical and Surgical Journal* appears an article by Dr. J. W. Swift, bearing upon the question of the determination of sex before birth. He states that his attention was first directed to the inquiry by Dr. Heitzmann, of this city, who promulgated the following ingenious theory:

The ovum represents the female element, the spermatozoa the male. If the ovum becomes impregnated by a few spermatozoa, the female element will be in excess, and the result a female. If, on the other hand, a good many spermatozoa impregnate the ovum, the male element will preponderate, and a male will be the result.

Now, it is argued, if the ovum is high up—that is, in the ovary, or at the fimbriated extremity of the Fallopian tube—probably only a few spermatozoa will come in contact with it; but if the ovum is low down, then the spermatozoa will be in excess.

If menstruation and ovulation are dependent one on the other, then the situation of the ovum may be determined by the menstrual period. During the interval between the periods the ovum is in the ovary; just before the flow begins, the ovum may be on the surface of the ovary, or in the fimbriated extremity of the Fallopian tube. As menstruation goes on the ovum descends, and the flow may entirely cease before the ovum is discharged. Then it is low down in the Fallopian tube, or even in the uterus itself.

If coition takes place during the interval between the periods, or just before menstruation begins, the ovum being high up, only a few spermatozoa reach it; but if copulation is just after menstruation, then the ovum is within reach of many spermatozoa.

Dr. Swift seems to have been much impressed with these assertions of Dr. Heitzmann, and tested the rule in twenty cases which came under his notice, and with surprisingly satisfactory results.

So far as the illustrations go the theory would seem to be proven, but even the writer of the article in question is not yet prepared to be positive on any of his points. There are too many circumstances to be taken into account before any conclusions can be reached. In the matter of reproduction the theory to be well founded must have an application equal in extent to the whole domain of comparative anatomy. As it is, however, the weight of testimony appears to be on the other side of the question. There are, in fact, very many conditions to be fulfilled before the facts of experience can be explained even by the most plausible theory. The main difficulty would seem to be in drawing the line when the coitus is not performed according to the rule laid down between the male and female sex with a more than ordinary chance of straddling a so-called hermaphrodite. Then the ovum itself is sometimes quite perverse as to the time when it starts upon its journey, sometimes being far in advance of the menstrual flux and sometimes not leaving the neighborhood of the ovary until many days have elapsed. We know also that despite the times of coition some couples always have boys and others girls. In connection with this part of the subject it may be apropos to refer to one species which during one part of the year produces nothing but females and another part of the year nothing but males, and also that this change takes place without any new impregnation, as one coitus lasts for many generations. But, as we have before remarked, the theory is based upon some very novel and suggestive propositions, and deserves an investigation into the real significance of the facts which have been presented and their particular bearing upon the question at issue.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 8, 1878.

DR. JOHN C. PETERS, PRESIDENT, IN THE CHAIR.

LIGATION OF LINGUAL ARTERIES.

DR. J. W. HOWE exhibited a specimen of cancer of the tongue, which he removed by operation, having previously ligated both lingual arteries near their origin. (*Vide* page 347.)

CANCER OF RECTUM.

DR. PEABODY presented a specimen of cancer of rectum, with the following history:

Patient was a native of Ireland; 50 years of age; a porter by occupation. Was operated upon for carcinoma of the rectum, by Volckmann's method. Several drainage-tubes were introduced, and the wound dressed according to Lister's method. Operation was not done under spray. Subsequent dressings all were done under spray. Patient died of pyæmia on the third day. Microscope showed carcinoma to be of colloid variety. Heart during life was known to have very feeble action, but was not irregular. There were no murmurs.

At autopsy wound was found to be in excellent condition, though no union had taken place. Heart, with exception of apex of left ventricle was filled with soft, friable, dust-colored clots. Apex of left ventricle on the contrary contained several firm masses of fibrine, which were adherent to the walls. This part of left ventricle was about large enough to contain a chestnut, and formed a sort of secondary cavity by itself, projecting beyond surface of ventricle. Its walls were white, tough, and very uneven, and seemed to contain almost no muscular tissue. I thought it first

either a metastatic deposit of carcinoma, or possibly, a gummy tumor. Microscopic examination, however, decided against both hypotheses. Walls were found composed almost purely of firm, tough, fibrous tissue, with here and there a large, flat cell, and few bundles of muscular fibres. It became evident that I had to do with an aneurism of the heart, situated where aneurisms of the heart very commonly are, and not very far advanced. Beginning of process was most probably, as is usually the case, coincident endocarditis and myocarditis.

Second specimen was from same subject, and was microscopic section from pyramid of one kidney. It showed largest colony of micrococci that I have ever seen of ante-mortem formation. It was distinctly visible to the naked eye. Evidently, on microscopic examination, situated in capillary blood-vessels, whose walls are distended at intervals by its growth in such a way as to suggest the irregular outline of lymphatic vessel. Only other evidence of pyæmia was a few drops of pus in right elbow-joint.

CYST OF THE IRIS PRESENTED BY DR. H. KNAPP.

DR. H. KNAPP exhibited a cyst of the iris, and gave the following history:

The small specimen I beg to present, is a typical example of a *cyst of the iris*. Two weeks ago I removed it from a boy who had injured his left eye with a toy pistol, in July, 1874. When I saw him, forty-eight hours after the accident, I found a small wound in the upper part of the cornea, plugged with iris. The lens was uninjured, but with the ophthalmoscope I detected in the posterior part of the vitreus a shining piece of metal—a gun-cap—which had produced a considerable degree of retinal congestion, but scarcely any turbidity of the vitreus. I succeeded in extracting it with a hollow little hook, through an opening which I made in the equatorial region of the globe. The boy was in deep narcosis. Looking through a forehead mirror into the pupil, and keeping in sight both the position of the foreign body and the movements of the hook in the vitreous chamber, I succeeded in extracting the gun-cap. Then I united the wound in the sclerotic with two delicate sutures, removed all the iris that was engaged in the corneal wound, and applied a charpie-flannel bandage to both eyes.

The recovery was undisturbed, prompt, and complete. A white scar, seen with the ophthalmoscope, denoted the place in the equatorial region where I had pierced the eye. The congestion of the inner membranes disappeared; the pupil was slightly oval, being drawn toward the corneal wound, which had left a small adherent leucoma. Tension and shape of the eye were normal, and the patient had recovered almost complete acuity of vision (V. $= \frac{20}{30}$). I saw him from time to time, last in the spring of this year, and found neither irritation nor any other changes in the eye than the scars described.

During my absence in Europe, last August, the boy presented himself at my office to Dr. T. R. Pooley, who replaced me, and at once told the mother that a cyst had developed in the iris. He had the courtesy to advise the mother to wait for my return, which was expected in September. When I saw the patient, on the 21st of last month, I could but confirm Dr. Pooley's diagnosis. A transparent cyst occupied the upper third of the anterior chamber. Its translucent wall was in contact with the cornea, the iris (which it had detached from its ciliary insertion), the free upper part of the lens-capsule, and probably with the head of the ciliary muscle and the trabecular tissue, which constitutes the inner boundary of Fontana's spaces. The lower convex border of the cyst was in front of the centre of the pupil. (See Fig. 1 of the accompanying wood-cut.) The pupil dilated by atropine; the media and fundus were found healthy. Sight good.

FIG. 1.

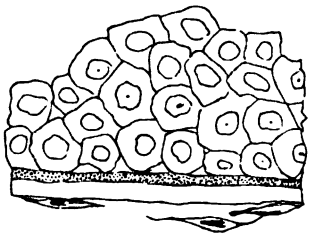

FIG. 2.

I operated on the eye a few days later. A Graefe's knife was passed through the upper part of the anterior chamber, extending on both sides beyond the limits of the cyst. The iris, together with the cyst, prolapsed; both were seized with forceps, drawn out, and cut off. The recovery was kind and rapid. There was a large and clean coloboma. Only the upper part of the cornea shows an opacity, about twice the size of a pin-head, evidently a part of the anterior wall of the cyst, remaining in contact with the cornea. Whether or not it will be the starting-point of a new cyst, I am not prepared to state. But from the radical removal of all the iris tissue, in which the cyst originated, I am inclined to frame a favorable prognosis.

The cyst is in intimate connection with the iris tissue. Its wall consists of a hyaline membrane, upon the outer side of which a moderate number of spindle-shaped cells are observed, whereas the inner side is lined with a regular layer of well-developed epithelium cells. (See Fig. 2 in the above wood-cut.) The specimen, therefore, belongs to the group of serous cysts of the iris, which is the more common; the other, the atheromatous, being very rare.

A CASE OF EPITHELIAL CANCER OF THE LARYNX—THE VALUE OF TRACHEOTOMY AS A PALLIATIVE PROCEDURE.

DR. BEVERLEY ROBINSON exhibited a patient upon whom he had performed tracheotomy for epithelial cancer of the larynx.

A. C., æt. 31, by occupation a jeweler, came under my care October 18, 1876. Eighteen months prior to this date he began to suffer from pain in his throat during deglutition. Not until fourteen months later did he suffer from cough and expectoration of viscid phlegm. At that period his breathing was easy. He had been hoarse, however, during four to five months, and his cough had a sharp, metallic ring. For the past two months patient had had profuse suppuration from the left middle ear. His general appearance was pale and anæmic, but not cachectic. Upon inspection and palpation of his throat exteriorly, no swelling of the soft parts over the larynx was found, and there was no deviation of this organ. The lymphatic glands of the neck and under the lower jaw were normal. By moderate pressure no additional pain was occasioned. A *laryngoscopic examination* showed considerable thickening of the epiglottis and a well-marked mammillary appearance of its posterior surface. Along its free margin two deep fissures were distinctly visible. The upper two-thirds of the epiglottis were involved by the morbid process. Upon more careful investigation an olivary

growth was seen projecting from the ventricular space on the left side. The vocal cords and ventricular bands were not implicated by the growth. The arytenoid cartilages were swollen and smooth. Physical exploration of the chest furnished only negative signs of morbid changes, although the dyspnœa was greater upon slight physical exertion than could fairly be accounted for by the intralaryngeal condition. From Oct. 20th to Nov. 22d, on several occasions I brought away, by means of Mackenzie's tube-forceps, portions of the growth seated in the sacculus laryngis. These were examined microscopically by myself, and afterward by Dr. Satterthwaite, and declared to have, without doubt, the characters of epithelial cancer.

On Dec. 6th the morbid processus had extended visibly to the arytenoid cartilages and the ary-epiglottic folds. Ulcerative action was already considerable, and by Jan. 5, 1877, the disease involved the entire larynx. March 10th, patient's condition not much changed since last seen. I did not see him again until Jan. 15, 1878, when I was requested by Dr. Davidson, at that time house-physician to the Mt. Sinai Hospital, to call and make an examination of his throat. I found him suffering from intense dyspnœa and incessant cough. He was very hoarse, pale, and emaciated, and his breathing stridulous in character.

With the laryngeal mirror the epiglottis, arytenoid cartilages, and ary-epiglottic folds were *all* found to be very much infiltrated, but smoother than when last examined. During phonation these masses approximated so closely that the vocal cords could not be seen, and the superior opening of the larynx was entirely occluded.

March 29th, was called to see patient at his own home. He told me that tracheotomy had been performed upon him by Dr. Guleke nine weeks previous. He was still wearing a tracheal tube. This tube was in silver, with an oblong opening on its convex surface to permit the passage of air through the larynx. For some days past patient had had increasing difficulty in introducing and withdrawing his tube. This difficulty I found to be occasioned by the median portion of the thyroid gland elongated downward, and which partially filled up the opening of the tube. After removing his tube by forcible traction, I introduced an ordinary tracheotomy canula, and patient was able to talk very intelligibly.

Sept. 29th.—Patient came to see me, breathing easily through his tube. His whole aspect was greatly improved, and he had grown quite stout. His face, though somewhat pale, presented a healthy hue. There was no engorgement of the submaxillary ganglia. He swallowed without difficulty, and coughed infrequently. He then wore a canula perforated with several small holes as large as No. 5 to 6 shot upon its convex surface. These openings enabled him to talk intelligibly when the outer orifice of the canula was closed. Without these small holes, when the tube was closed with a finger, he could only make himself understood imperfectly and by a strong effort of articulation. The mucous membrane of the trachea and the surrounding soft tissues had no tendency to become impacted in the orifices of the canula, so that the patient could introduce or remove it with perfect ease. The superior opening of the larynx was not larger than one of the openings of the tube, and during inspiration none of the intralaryngeal parts could be seen. This small orifice was surrounded by the thickened and infiltrated epiglottis, arytenoid cartilages, and ary-epiglottic folds, which were *all* now smooth, and offered the appearances of a hard œdematous condition.

The points of special interest in this case, and to which I would call your attention, are the following:

1. The rarity of this *form* of disease. Out of thirty-seven cases of cancer observed by Dr. Charles Fauvel, of Paris, he has only seen one case in which it took origin in the epiglottis.

2. Absence of engorgement of ganglia of neck, which hitherto has been considered a *constant* sign of this disease.

3. Changes undergone in the laryngeal appearances, more particularly after the performance of tracheotomy.

4. Great improvement in deglutition, cough, and general health.

Are not these different favorable modifications of the patient's condition, both general and local, due to the *rest* afforded the larynx by the presence of the tube and equally, too, by the absence of the frequent and irritating contact of the atmospheric air with eroded and irritable mucous surfaces?

5. The small holes in the convex portion of the tracheotomy canula, enabling the patient to talk intelligibly through a single, equally small opening in the larynx. This fact shows how small a column of air arising from the larynx can produce good vocal sounds. In my case the patient cannot breathe sufficiently through an opening, which is, nevertheless, quite large enough for the transmission of moderately powerful vocal sounds. The practical deduction is that the large oval opening left in certain exterior tracheotomy canula are not essential, and that one or more smaller openings is all that is required in instances where the column of expiratory air cannot pass *around* the outer canula.

In connection with this case, I take pleasure in showing to the Society a solid tracheotomy guide, which I had made for myself, in order to facilitate the introduction of the canula after an incision has been made into the trachea. The use of this guide precludes the use of all forms of tracheal dilators, and thus one of the drawbacks in many operations of tracheotomy is almost entirely removed.

Dr. Briddon thought that the case exemplified the utility of giving rest to the larynx in serious diseases of the organ. Such a principle of treatment was well founded in cases of syphilitic disease, and there was no reason why equally good results should not follow in cases of epithelioma. He referred in this connection to a case of syphilitic disease of the larynx, in which the patient wore a tube for six months, with great comfort, and with a corresponding relief of his laryngeal symptoms. Finally the necrotic processes became so extensive, that extirpation of the disease was considered necessary. Death resulted soon afterward.

Dr. Howe stated that he understood Dr. Robinson to say, that the disease in the larynx disappeared after the operation. If this were a fact, he doubted the correctness of the diagnosis of epithelioma.

Dr. Robinson remarked, that he did not wish to be so understood. The disease in the larynx had not disappeared, but was made stationary, and there was an absence of the evidences of irritation.

Dr. Howe had never seen a case in which such a condition obtained. In fact, he could not conceive how ulcerations, due to malignant disease, should show any signs whatever of healing.

Dr. Briddon—That may be possible to a certain extent.

DR. RIPLEY—The rule is when ulcerations have commenced, that the disease progresses very rapidly.

DR. BRIDDON—That is the rule; but there are exceptions to it.

DR. RIPLEY said that Dr. Robinson's case illustrated an important fact in regard to the small size of the opening really required to admit the necessary quantity of air. He believed, ordinarily, that openings made into the trachea were too large. He had a canula, which was small enough to use upon a child one year old, and yet large enough for an adult.

DR. BRIDDON thought that the tube should, in any case, be large enough to prevent any noise in inspiration. As a rule, he thought, that the smaller the opening consistent with a sufficient supply of air, the better.

DEATH IN CONFINEMENT—PULMONARY THROMBOSIS.

DR. E. M. CUSHIN presented the lungs and heart removed from a patient, who died in the confinement ward of the N. Y. Infirmary, on Aug. 10, 1878. The following was a history of the case:

Louisa M., aged 28, native of this country. Entered the infirmary for her sixth confinement. Her condition was excellent; the only symptom complained of being a frequent desire to urinate. The urine, upon examination, being found quite normal, this symptom was attributed to pressure of the fœtal head. On August 2d, labor began; it was normal throughout, lasting about ten hours from the beginning of dilatation of os. At about 5 P.M., a male child was born, which weighed 11½ lbs.; the uterus contracted well. At 9 P.M., there was some pain complained of. Upon examination, the uterus was found reaching nearly to the umbilicus, and firm to the touch; a clot being suspected, the bladder was emptied, and a digital examination was made; no clot was found, however, and the size of the organ was attributed to incomplete retraction of its muscular fibre. Ergot and an anodyne were given, and from this time, although the uterus remained large, the lying-in was apparently normal in every respect. The pulse and temperature, taken night and morning, were normal throughout. The temperature being elevated but one degree on two occasions, and the pulse varying from 68° to 72°, excepting on two occasions, when it rose to 80°.

On the morning of the 9th day, I gave the patient permission, for the first time, to sit up. The record shows on this morning a temperature of 99°, pulse 80, and respiration 20. At about eleven A.M. I was hastily summoned, the messenger saying that the patient in question had fainted. Upon arriving in the ward, I found her unconscious, with the eyes fixed, and the pupils dilated. The pulse was beating moderately full and regular, and she was making violent respiratory efforts. I learned from the nurse, that the attack had come on suddenly. Upon the patient sitting up and attempting to move to a chair, she made an exclamation, and fell back upon the bed. Soon after my arrival consciousness returned, and the patient gasped out that she should die, and begged for air. The restlessness became extreme. The history of the attack, and the symptoms leaving no doubt as to the diagnosis, and the prognosis being almost equally certain, the patient's bed was rolled from the wall to an isolating room. At this time the heart's action became very weak and irregular. An attempt to administer a stimulant was followed by an agonizing attack of suffocation, and the heart ceased beating. The application of a Faradic current, which was at hand, and hypodermic injections of brandy, restored the heart's action. Consciousness returned, and the patient spoke intelligently. A few moments after she turned suddenly upon her side, and as suddenly the heart again ceased to beat. The respiration ceased at this time also; all efforts at restoration were unavailing. The attack, from its onset until death, lasted about thirty minutes.

Post-mortem, four hours after death.—Moderate rigor mortis; fine muscular development. Upon opening the thorax, the pericardial sac was found very much distended towards the right side. The diaphragm was elevated. The lungs were collapsed, lying in the upper portions of their respective cavities. There was but the normal amount of fluid in the pleural cavities. The lungs were free, excepting at a circumscribed point at the apices of each, where there were slight adhesions. Upon opening the pericardial sac, only the normal amount of fluid was found, and the distention proved to be due to the size of the right ventricle and auricle, which were expanded to their utmost. Upon opening them, a large amount of entirely fluid blood escaped. The heart and lungs were then removed together for further examination. The liver and spleen were congested, otherwise normal. The kidneys, especially the left one, were also congested. The uterus reached three and a half inches above the pubes. Its tissue, and that of its appendages were quite healthy.

The veins of the pelvis were then examined. The left uterine vein contained a soft clot, which extended into the internal iliac as far as the common iliac. The ovarian vein of the same side also contained a clot, reaching almost its entire length. No clots were observed in any of the other veins. The bladder was very much diminished in size, and its walls greatly hypertrophied; the mucous membrane was healthy. At the internal meatus there was a slight stricture. The heart and lungs were then more carefully examined. Upon seizing the pulmonary artery, a resistant mass could be felt, extending as far as the entrance of the vessel, into the lung. A triangular incision was then made in the right ventricle, and upon lifting the flap, and exposing the pulmonary orifice, the latter was found to be entirely occluded by a firm, irregular, and pale-red clot. The right oriçular ventricle valve was normal; the left ventricle was firmly contracted. The valves of the left heart were normal, and there were neither fibrous clots nor strings in any part of the cavities of the heart. The lungs were diminished to about one-third.

EXTIRPATION OF CANCER OF RECTUM.

DR. BRIDDON presented a specimen of cancer of the rectum, which he had removed by amputation from a maiden, æt. 36, a native of Ireland, and a dressmaker by occupation. She was admitted to the Presbyterian Hospital, Sept. 14th, 1878. He then gave the following history as prepared by Dr. Lacayo, house surgeon of the hospital: Patient's father, mother, and two brothers died of phthisis. Two sisters have had hemorrhage from the lungs. One of her aunts died of a tumor in her uterus, the nature of which she is not able to say. She has always been very healthy up to two years ago, when she began to complain of slight nocturnal backaches. About six months ago the pains increased in severity, and were accompanied by tenesmus and bleeding from the rectum; this condition lasted for two months; the following two months she was free from suffering. Two months ago, the pain, tenesmus, and bleeding returned in a more aggravated form; they were constant, and accompanied by constipation; she has gradually lost flesh.

Patient was a thin woman, apparently of a weak constitution. Appetite good. Bowels constipated. She suffers from a great deal of pain and bleeding from the rectum.

Between two and a half and three inches above the anus the finger comes in contact with an irregular, nodular growth, involving principally the anterior and right lateral half of the gut; it extends up at least two inches, and it is only with difficulty, crowding the finger upward, that its superior limit can be reached. On the right side it appears to be continuous, with a solid mass as large as a hen's egg, and through which it is fixed to the pelvic wall.

Sept. 19th, the operation of extirpation of the rectum was performed by Dr. Briddon. The patient being put under ether, the operation was designed so as to spare both sphincters, and, in fact, all the healthy gut below the tumor. The perineum in front was transfixed by a long, straight, sharp-pointed bistoury entering immediately behind the fourchette, and coming out in the rectum one inch above the internal sphincter; by a sweep of the knife all the intervening tissues were severed; the fingers were then entered into the connective-tissue space between the rectum and the vagina, and the former was peeled off as high as the fingers could reach; the perineum behind was then transfixed by entering the bistoury one inch above the sphincter internus through the posterior wall of the gut, and out through the integuments in front of the point of the coccyx; these incisions in front and behind the anus divided the whole perineum into two flaps, and in each lateral flap was half the sphincter and a longitudinal strip of undisturbed mucous membrane reaching from the verge of the anus to the seat of the disease; traction on the lateral flaps through these strips of membrane served to bring down and steady the gut above; next the connections between the gut and sacrum were broken up as high as the middle of that bone; and now, having pretty good control of the tumor, a transverse section was made below the growth, leaving the strips of mucous membrane below intact; it now became manifest that the solid mass of the tumor was firmly adherent to the right sacro-iliac ligament, and it was very difficult to sever this connection; it was also found that the upper limit of the growth was incorporated with the perineum, the outside of which was visible, and demonstrated to those around; in attempting to dissect this off, it was opened to the extent of two inches; it was, however, promptly closed by a number of carbolized catgut sutures, and the process of separation was continued upwards until we got fairly above the limit of the growth; this, of course, opened the meso-rectum, but it was unavoidable. The gut was now divided above the limits of the disease and stitched to the mucous membrane left in the lateral flaps; there was no traction on the sutures, in fact there was, if anything, a redundancy of tissue; deep drainage-tubes were introduced, and the perineum was restored by deep silver-wire sutures, supplemented by superficial ones of carbolized silk, and the wound was thoroughly irrigated with carbolic acid solution.

The operation lasted two hours and a half, and the evidences of shock, although the loss of blood was not very great, were pronounced; but, of course, a good deal of this might be attributed to the prolonged etherization.

Twenty-four hours after the operation symptoms of peritonitis set in; these subsided, however, in four days under the free use of opium and cold water applied to the abdomen. The wound was kept clean, though there was very little discharge. With the exception of vomiting every now and then the patient got along very nicely until the eighth day after the operation, when she commenced vomiting continually. The discharges from the wound were grumous and very offensive at this time. On the ninth day the vomiting was controlled, and the patient felt very easy and comfortable all day. At 8 P.M., she went into a state of collapse, and died next morning at 8 A.M. Her temperature ranged from 97° to 101°; her pulse, 105 to 135.

At the autopsy all the organs, except the kidneys, were found normal; they were in condition of chronic diffuse nephritis; right weighing 4 oz., left 2 oz.

There was unexpected absence of the evidence of those destructive processes which would be looked for after an operation of such magnitude, and in which there was so much separation of connective tissue; there was simply no union anywhere, no process of repair, and at some points the surface was covered with slough. The upper portion of the rectum was separated from the lower by an interval of about an inch. Evidences of peritonitis limited to the Douglas cul-de-sac; wound in peritoneum ununited.

Examination of growth, by Drs. Satterthwaite and Porter: The tumor involved the right lateral portion and posterior half of the rectum, commencing three inches above the anal orifice, and extending up about three inches. It occurred as a deep funnel-shaped ulcer with irregular and raised edges, the mucous membrane around being thickened to a slight extent. The gut was contracted at two points, its lumen at the lower stricture being about one-half an inch, and the upper about one-third. The gut above opened principally into the ulcer, the same condition existing below. The diameter of the ulcer was two and a half inches; the depth one and a half inch; it was in the hardened mass behind the deepest portion of the ulcer that evidences of cancer were found.

In making a microscopic examination of the rectum at a point midway between the anal orifice and the sigmoid flexure, where the diameter of the strictured gut was not more than one-half inch, it was found that an active infiltration of the parts existed; the new corpuscles being apparently lymphoid, they existed in the epithelial coating of the surface of the intestine about the crypts of Lieberkuhn, in the submucous and muscular tissue. The crypts were lengthened, measuring on an average from $\frac{1}{170}$ to $\frac{1}{125}$ of an inch; muscular tunics only slightly thickened; the circular chiefly. Posterior to the gut, in the thickened substance which formed the mass that was adherent to the right sacro-sciatic ligament, the evidence of cancer, in the shape of epithelial nests in connective-tissue alveoli were found.

DR. STIMSON referred to a case in which, he said, a similar operation had been performed by Dr. Keyes, and with the same object of saving a portion of the mucous membrane between the verge of the anus and the seat of the disease.

RUPTURE OF THE URETHRA FROM A KICK.

DR. W. T. BULL exhibited a specimen of rupture of the urethra, the result of a kick in the perineum. The patient was forty years of age, and was not seen until thirty-six hours after the accident, when he was admitted to the Chambers Street Hospital. On admission he complained of intense pain in the hypogastric region, œdematous swelling of perineum, and the other symptoms of urinary extravasation. No instrument could be passed in the urethra beyond a distance of five inches. An incision was promptly made in the median line; both ends of the urethra were secured,

and free communication established. The patient did well for three days, when he died suddenly, the result of cardiac thrombosis.

At the autopsy the bulbous portion of the urethra was found torn across completely, the two ends having been separated from each other fully three-quarters of an inch. In the intervening cavity were some broken down blood-clots. Anterior to the rent there was a contusion of the mucous membrane of the urethral wall, due to efforts at catheterization.

HAIR-PIN IN THE FEMALE BLADDER.

DR. J. C. PETERS exhibited some calcareous deposits and a hair-pin four inches in length, which were removed by operation from the bladder of a young female. For fourteen months she had been under the care of an homœopathic practitioner, who had diagnosticated cancer of the uterus. The remedies prescribed were the juice of six lemons daily, rhubarb and aloe pills, codeine, arsenic, and quinine. When Dr. Peters was called to the case, on the first examination of the bladder, he struck a calculus. As felt through the vagina, the stone seemed to be as large as the end of the thumb. An operation was suggested at once. The urine, having been examined, was found loaded with albumen, but the kidneys themselves were sound. The operation was performed, Oct. 2d, by Dr. Snelling. The urethra was dilated, and, after considerable difficulty, owing to the peculiar shape of the foreign body, the latter was removed along with a considerable quantity of calcareous matter. The time occupied was about one hour. The removal of the hair-pin was effected by the introduction of one finger into the bladder and the other into the vagina. When the young lady recovered from the effects of the ether, she was merely shown the calcareous matter removed from the bladder, giving her an opportunity for supposing that the hair-pin had been absorbed.

DR. BRIDDON remarked that there were quite a large number of instances in which female patients had introduced foreign bodies into their bladders. He had in his possession a hair pin, also removed from the bladder, where a calculus as large as a walnut attached. It was given to him by Dr. Walter Gillette, who extracted it through a vaginal incision. In this connection he referred to a female patient in the Presbyterian Hospital, who acquired the habit of introducing foreign bodies into her bladder. He finally concluded to stop the practice by encircling the orifice of the urethra with a silver wire, leaving just space enough for the passage of the urine.

The Society then went into Executive Session.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS.

Stated Meeting, Oct. 24, 1878.

DR. SALVATORE CARO, CHAIRMAN.

ABSCESS OF THE KIDNEY OCCURRING IN A CHILD THREE WEEKS OLD.

DR. CHURCH related the history of a case as follows: A child, born apparently healthy, was, when three weeks old, suddenly attacked with severe pain in the abdomen, the cause of which was not at once diagnosticated.

There was considerable febrile movement, and it was thought there might be some enteritis present, although there were no well-marked symptoms of any abdominal disease. Pain being the chief symptom, it was controlled by the use of opium.

At the end of ten days a circumscribed swelling appeared in the left hypogastric region. It was dull upon percussion. Fluctuation was recognized at the end of two or three days, and a considerable quantity of pus was drawn off by means of the aspirator. Only a short time elapsed before the swelling had regained its original size. The child continued to lose flesh and strength, and finally died. At autopsy the capsule of the left kidney was found filled, and the kidney itself infiltrated with pus. Dr. Church thought that abscess of the kidney was an unusual occurrence at such an early period in life. Abscess rarely occurred in that region, except in connection with calculi, and it could scarcely be supposed that a calculus had formed at such an early age. The urine was not examined.

DR. POST referred to a pamphlet recently translated from the French, in which were given certain interesting facts relating to the urine of new-born infants, both in health and in disease. One interesting fact, as stated by the author, was that the specific gravity within the first thirty days did not rise above 1007, and that a low specific gravity continued for some time. He further remarked that abscess of the kidney occurred not very infrequently independent of calculi.

DR. I. E. TAYLOR referred to cases of perinephritic abscess reported by Dr. Gibney, and questioned whether, in Dr. Church's case, the abscess did not originate outside of the kidney. He also referred to two cases which came under his observation in hospital practice, in which abscess in the region of the kidney was supposed by the surgeons to have had its origin in a chancrous condition of the vulva.

DR. J. C. PETERS referred to a case of abscess of the kidney, the cause of which was determined only at post-mortem examination.

The child was perfectly well, was rolling upon the floor, when it was suddenly seized with the most intense pain, which could not be attributed to any cause. It was supposed that a pin or a needle was pricking the child, but the most careful search failed to detect any trace of a punctured wound. The child died, and at autopsy a needle was found which had completely transfixed the kidney.

MANAGEMENT OF THE BREASTS IN CASES IN WHICH IT IS IMPOSSIBLE FOR THE MOTHER TO NURSE HER CHILD.

DR. JOEL FOSTER reported two cases in which he had followed the "let-alone" plan of management for the breasts of women who were unable to nurse their children.

In one instance the child was still-born, and in the other the child died a few hours after birth. In both cases the secretion of milk occurred as usual, and the breasts became filled. The breasts were left entirely without treatment, and no trouble whatever ensued. Dr. Foster believed that such a plan of treatment produced far better results than could be obtained by the use of belladonna, by strapping the breasts, or by any other plan of management.

DR. CARO remarked that the "let-alone" plan of treatment was generally accepted by the Section for those cases in which there was no occasion for nursing from either breast. The question which he had raised when the subject was before the Section for discussion on a former occasion was, what was to be done in cases in which the woman was obliged to give nurse from one breast, but, on account of ab-

sence of the nipple or a like cause, it was impossible for the child to nurse from the other breast? In such cases his plan of treatment was to paint the breast with belladonna.

Dr. Church remarked that the milk could be dried up in one breast with great certainty and safety, by simply covering the breast with diachylon or adhesive plaster. Cut a piece of plaster large enough to cover the breast, apply it, and direct the woman to wear it constantly.

Dr. I. E. Taylor remarked that, in cases in which the woman had nursed her child for a few days, and the breasts had become distended, his general plan of management was to do nothing whatever for the breasts, if it was desirable to discontinue nursing. He simply directed the woman to abstain from taking any fluids for a few days, and let the breasts entirely alone.

In cases in which the distention became very great, he occasionally directed that the milk be drawn; but it should be drawn only at long intervals.

Dr F. V. White asked whether, in ordinary cases in which the milk had been dried up, the general condition of the mother had remained as good as in the cases in which the laws of nature had been more fully regarded and the secretion of milk maintained for some time? His experience had been that it was better for the woman to have the milk drawn for from four to six weeks after confinement than to check the secretion at once.

Dr. Foster remarked, it was a received opinion that the secretion of milk should be maintained for a considerable length of time after confinement, and that ten years ago he himself entertained that opinion. But his experience since had convinced him that no ill-effects arose from allowing the milk to dry up at once, and that was the plan of treatment which of late he had adopted.

RELATION OF THE UTERUS TO THE MAMMARY GLANDS —PREVENTION OF POST-PARTUM HEMORRHAGE.

Dr. I. E. Taylor believed, with reference to the question asked by Dr. White, that it was necessary to consider the intimate physiological relation which existed between the uterus and the breasts. There were cases in which the condition of the woman subsequent to confinement was greatly benefited by nursing; as an illustration, the history of a case was related. The woman had suffered severely from post-partum hemorrhage at her previous confinements, which had usually had a duration of fifteen or twenty hours. To prevent post-partum hemorrhage, the case was managed as follows, the object being to relieve the uterus from prolonged expulsive efforts.

The dilatation of the neck had reached the size of a two-shilling piece when the doctor arrived, and the os was soft and yielding. The membranes were ruptured in the interval of pain, and, with the third pain which followed, the child was partially expelled from the uterus. It would have been entirely expelled had not the doctor held the lower extremities and part of the body in the uterus for the purpose of exciting vigorous uterine contractions.

The child was occasionally slapped, and held in the uterus for ten or fifteen minutes (the time might have been longer, if necessary), when it was gradually withdrawn, and firm contraction of the uterus followed. No hemorrhage occurred. The next object was to prevent hemorrhage and secure a good recovery for the woman. To aid in that direction the woman was induced to nurse her child, for Dr. Taylor believed that nursing would assist the process of involution of the uterus. At the end of four weeks, the woman having been kept perfectly quiet in bed for three weeks, the uterus was well reduced in size, and the doctor was able to report a much more favorable progress in the case than was anticipated. He thought the uterus was much smaller than it would have been had the woman not nursed her child. There were cases, of course, in which it was eminently proper to prevent the mother from nursing her child. The physician should be the arbiter in all cases, but in his decisions he should endeavor, as far as possible, to imitate Nature's indications.

Dr. Caro thought the view entertained by Dr. Taylor, with reference to this case, was probably correct. He had also resorted to the same measure for preventing post-partum hemorrhage.

There was one interesting point in his case, however, and that related to the duration of the previous labors. Dr. Caro thought that the post-partum hemorrhages from which the woman had suffered might have been due to inertia of the uterus consequent upon prolonged labor. Dr. Taylor had, by mechanical and skilful interference, expedited the process of parturition, and therefore prevented the uterus from falling into a condition of inertia, consequently no post-partum hemorrhage occurred. The process of involution, therefore, went on much more rapidly than after former confinements. He believed that the benefit to the mother came more from the mode of delivery than from nursing the child. He further believed that the child was benefited more than the mother by nursing. It was a popular view if the mother was sickly after confinement, she not having been permitted to nurse her child, that it was due to that fact; but Dr. Caro regarded the view as incorrect. If the subsequent health of the mother was not good, it was not due to the fact that she had not nursed her child, but it depended upon some other cause.

Dr. Taylor thought that a labor fifteen or twenty hours in length did not necessitate inertia of the uterus. The treatment which he adopted in cases in which he feared that post-partum hemorrhage would occur was to keep the lower portion of the child in the uterus, occasionally slapping the part delivered, until the uterus contracted firmly; he then withdrew the child slowly, and held the uterus with the hand upon the abdominal wall.

There being no further discussion, the Section adjourned.

New Method of Covering the Taste of Cod-liver Oil.—Dr. Ponteres mixes a tablespoonful of cod-liver oil with the yellow of an egg, and when they are thoroughly combined adds to them a few drops of spirits of mint and half a glass of sugar-water. In this way he obtains a sort of mulled-egg, which differs very little from ordinary mulled-egg, and which presents neither the taste nor the odor characteristic of cod-liver oil. It can consequently be taken without repugnance by the most fastidious patients.—*Union Médicale.*

Vulvar Pruritus.—M. Marius Key recommends the glycerole of cade as a local application in the treatment of pruritus of the vulva. The formula he employs is one drachm of oil of cade to half an ounce of glycerole of starch. In combination with it he uses tonics, hip-baths, and emollient injections, to which laudanum is freely added. He has only tried this treatment in one really rebellious case, but that time with success.—*Gaz. Méd. de Paris.*

New Instruments.

PARKER'S HYPODERMIC SYRINGE.

Dr. T. S. Parker, of Cohoes, N. Y., has devised a very convenient and useful hypodermic syringe, which is operated upon a somewhat novel principle. It consists of a metallic case, enclosing a graduated glass tube of uniform calibre. The piston is made into a rack, the serrations of which are all mathematically correct, each of said serrations representing the projection of a minim of fluid. This rack piston, which, when the instrument is filled with fluid, is contained in a separate compartment behind, is worked by means of a small thumb-spring. Each depression of this spring causes its angular bar to catch into a notch and move the piston a corresponding distance forward. This contrivance does away with the necessity of setting the instrument for any particular quantity to be used, requiring only the counting of the clicks of the spring to ascertain the precise number of minims injected. The instrument is kept constantly loaded, and when not in use a cap is screwed upon the extremity of the barrel, in place of the needle. The filling of the barrel is accomplished by sliding the ring (O) of thumb-bar downward, lifting the bar from the rack, and allowing the piston to be worked by the sliding button (C). On the whole, the instrument is a very handy and effective one, and, with reasonable care, is not liable to get out of order. It has, besides some other advantages, that of being easily operated with one hand.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 20th to October 26th, 1878.

Baily, J. C., Major and Surgeon. Granted leave of absence for one month, with authority to go beyond the limits of the Division. S. O. 159, Div. of the Pacific and Dept. of California, October 15, 1878.

Corson, J. K., Capt. and Asst. Surgeon, relieved from temporary duty at Fort Whipple, A. T., and assigned to duty as Post Surgeon at Fort Yuma, Cal., S. O. 119, Dept. of Arizona, October 10, 1878.

Ainsworth, F. C., 1st Lieut. and Asst. Surgeon. Assigned to duty as Post Surgeon at Fort Whipple, A. T. S. O. 119, C. S., Dept. of Arizona.

Barnett, R., 1st Lieut. and Asst. Surgeon. Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 93, Dept. of the Platte, October 14, 1878.

Treatment of Migraine.—Dr. Schartzke speaks highly of salicylate of soda in the treatment of nervous migraine. He gives at the onset of the headache, thirty grains of the drug dissolved in half a glass of sugar-water.—*Berliner klin. Wochen.*

Medical Items and News.

Contagious Diseases — Weekly Statement.—Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 26, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Oct. 19, 1878.	0	28	43	1	1	48	0	0
Oct. 26, 1878.	0	19	43	2	1	33	0	0

Office Surgeon-General U. S. Marine Hospital Service, Washington, D. C., Oct. 26, 1878.

National Quarantine Report.—Abstract of Sanitary Reports received during the past week under the National Quarantine Act:

New Orleans.—During the week ending yesterday evening there were 699 cases of yellow fever and 229 deaths. Total cases, 12,881; deaths, 3,864.

Plaquemine, La.—Total cases of yellow fever to Oct. 20th, 1,159; total deaths, 125.

Baton Rouge, La.—For the past week there were 170 cases of yellow fever and 15 deaths. Total cases, 2,340; deaths, 144.

Morgan City, La.—There were 7 deaths from yellow fever during the past week. Total cases to date, 510; deaths, 94.

Port Hudson, La.—Report to Oct. 20th gives total cases of yellow fever, 75; total deaths, 10, including four resident physicians. The first case of the fever occurred Sept. 9th; first death, Sept. 13th.

Mobile, Ala.—There were 71 new cases of yellow fever and 17 deaths during the week ending yesterday evening. Total cases, 164; deaths, 49.

Ocean Springs, Miss.—No deaths from yellow fever during the week ending at noon yesterday. There were 8 new cases in Ocean Springs, and 9 cases in the country not previously reported. Total cases, 145; deaths, 29.

Pass Christian, Miss.—For the past week there were 44 cases of yellow fever and 5 deaths. Total cases, 170; deaths, 18.

Water Valley, Miss.—Total cases of yellow fever to yesterday evening, 146; total deaths, 60. Six new cases yesterday.

Port Gibson, Miss.—The yellow fever has spread into the country. As near as could be ascertained, about 30 deaths occurred in the past week. The colored people in the country repel the friendly aid offered them, for fear of having the yellow fever brought to them by nurses, while they are dying from it without knowing that it is yellow fever.

Hudson, La.—To Oct. 13th there had been 75 cases of yellow fever and 18 deaths.

Germantown, Tenn.—The first case of yellow fever occurred August 20th. First case among inhabitants, August 25th. Total cases to noon, Oct. 16th, 65; deaths, 36.

Memphis, Tenn.—For the week ending the evening of the 24th inst., there were 50 deaths from yellow fever. Total deaths, 2,942.

Brownsville, Tenn.—During the week ending yesterday evening there were 16 deaths. Total cases, 560; deaths, 152.

Chattanooga, Tenn.—For the past week there were

80 cases of yellow fever and 23 deaths. Of these, 51 cases and 9 deaths were among colored people.

St. Louis, Mo.—At quarantine, during the past week, 3 residents were admitted and died of yellow fever. One patient, previously reported, also died of yellow fever.

Cairo, Ill.—For the two weeks ending yesterday evening there were 44 cases of yellow fever and 6 doubtful cases. Deaths for the same period, 16. Total cases, 76; deaths, 41.

Louisville, Ky.—There were 4 new cases of yellow fever for the week ending yesterday evening, and 7 deaths. Total cases, 131; deaths, 61, including refugees.

Cincinnati, Ohio.—No new cases of yellow fever during past three weeks. One death reported for the past week.

Decatur, Ala.—During the week ending yesterday evening there were 23 new cases of yellow fever and 13 deaths. Total cases, 178; deaths, 40.

Biloxi, Miss.—Up to Oct. 17th there were 295 cases of yellow fever and 40 deaths.

Greenville, Miss.—To noon of Oct. 11th there were 301 deaths from yellow fever, 21 of which were in the country outside of Greenville.

No cases of yellow fever or deaths during the past week at *Port Eads, La., South-West Pass, La.*, and *Key West, Fla.*

Havana, Cuba.—23 deaths from yellow fever and 1 from small-pox for the week ending Oct. 19th.

Hernando, Miss.—During the week ending yesterday evening there were 32 cases of yellow fever and 7 deaths. Total cases, 165; deaths, 63.

Deaths from four *preventable diseases* reported for the week ending Oct. 19th:

Enteric fever.—In Baltimore, 5 deaths; Boston, 2; Brooklyn, 2; Charleston, 3; Cleveland, 1; Philadelphia, 9; Richmond, 1.

Typhus fever.—One death in Brooklyn.

Scarlet fever.—In Baltimore, 6 deaths; Brooklyn, 5; Cincinnati, 14; Cleveland, 2; Philadelphia, 13; Richmond, 1.

Diphtheria.—In Baltimore, 6 deaths; Boston, 14; Brooklyn, 15; Charleston, 2; Cleveland, 13; New Haven, 5; Philadelphia, 13; Richmond, 2.

Great Britain.—During the week ending Oct. 5th there were 3,409 deaths in 28 large cities of the United Kingdom. The mortality was at the average rate of 21 annually per 1,000 of the population. In Brighton the rate was 14—the lowest; in Liverpool, 28—the highest. In the same cities, not including E linburgh, there occurred 11 deaths from small-pox, 161 from scarlet fever, and 33 from diphtheria.

Paris, France.—There were 30 deaths from enteric fever during the week ending Oct. 3d. The annual rate of mortality per 1,000 of the population, based on weekly mortality, was 22.5.

No deaths from cholera in Calcutta for the week ending Aug. 24th, and none in Bombay for the week ending Sept. 3d.

No reports received from the following places, where yellow fever exists: Vicksburg, Miss.; Holly Springs, Miss.; Canton, Miss.; Grenada, Miss.; Bay St. Louis, Miss.; Friar's Point, Miss.; Mississippi City, Miss.; Spring Hill, Miss.; Crystal Springs, Miss.; Hickman, Ky.; Grand Junction, Tenn.; Paris, Tenn.—JNO. M. WOODWORTH, *Surgeon-General United States Marine Hospital Service.*

HEAVY SENTENCE OF A DENTIST.—The Court of Assizes of the Seine-Inférieure, France, recently condemned a dentist named Paul Lévy to ten years' imprisonment for the crime of rape. His victim was a young girl, 20 years of age, and the crime was committed while she was under the influence of an anæsthetic. Lévy is married and is the father of three children. He has practised his profession for sometime in the city of Lyons.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—The following officers have been elected for the ensuing year:—President, Dr. Freeman J. Bumstead; Vice-President, Dr. A. E. M. Purdy; Recording Secretary, Dr. F. A. Castle; Corresponding Secretary, Dr. W. M. Carpenter; Treasurer, Dr. H. P. Farnham; Censor, Dr. P. F. Mundé.

THE ROLL OF HONOR.—The following physicians have died since our last report while in attendance upon patients suffering from yellow fever:

Memphis, Tenn.—Oct. 18th, Dr. M. T. Keating, volunteer from New York.

New Orleans, La.—Oct. 18th, Dr. Wilhelm Zinsser.

Brownsville, Tenn.—Oct. 18th, Dr. Gundtladt, volunteer from St. Louis, Mo.

Tangipahoa, La.—Oct. 15th, Dr. Carter.

Angola, La.—Oct. 20th, Dr. Heath.

Pattersonville, La.—Oct. 17th, Dr. M. A. Roche.

Vicksburg, Miss.—Oct. 28d, Dr. Gilliland.

Holly Springs, Miss.—Oct. 24th, Dr. Compton.

Total to date, 100.

CREATION OF A GASTRIC FISTULA IN A CASE OF STRICTURE OF THE ŒSOPHAGUS.—Prof. Trendelenburg, of Rostock, reports the case of a boy, eight years of age, who suffered from stricture of the œsophagus, caused by swallowing sulphuric acid. The boy was admitted into the hospital towards the end of 1876, and gastrotomy was performed on March 28, 1877.

It is worthy of note that Prof. Trendelenburg prefers a narrow opening, which can be closed by a simple drainage-tube, to a free opening, which would require a special apparatus for its closure. With the exception of a slight eczema about the fistula, the case presented no special features after the operation. A fruitless attempt was made to pass a sound through the stricture from below upward. The patient is now in good health and well nourished. He chews his food as usual, and takes also his drink in his mouth, and passes them into the stomach through a rubber tube.

Prof. Thiersh has been convinced by the examination of some preparations in the Leipsic Museum that the chief difficulty in passing a sound through a strictured œsophagus is due not to the narrowness of the stricture, but to the fact that three or four strictures, separated by two or three centimetres of normal mucous membrane, exist one over another. The bougie usually slips through the first one easily, but is arrested by the second, because the openings lie eccentrically, and not centrically.—*Allg. Med. Cent. Zeit.*

ASPILIA LATIFOLIA, A NEW HEMOSTATIC. — Dr. Roberts, of Liberia, Africa, speaks very highly of the hemostatic qualities of this plant, which is indigenous to the country, and is used by the natives in preference to all other drugs and methods. He has himself in several cases of wounds of arteries seen the hemorrhage stop in a few minutes, and the wounds heal in a few days, under a dressing of the bruised leaves and blossoms of the plant. It is still uncertain whether it acts mechanically like matico, or, like the juice of the Jatropha curcas, by coagulating the fibrin of the blood.—*Allg. Med. Cent. Zeit.*

Original Lectures.

LECTURES ON THE LOCALIZATION OF SPINAL AND CEREBRAL DISEASES.*

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Lecture VIII.

SUMMARY:—SURGICAL ASPECTS OF THE QUESTION OF CEREBRAL LOCALIZATIONS—CRANIO-CEREBRAL TOPOGRAPHY, AND ITS UTILIZATION IN DIAGNOSIS AND FOR OPERATIVE PROCEDURES.

GENTLEMEN:—The question of the utilization of the doctrine of localization in surgery remains for study. This, the most novel part of the subject, is, I think, of great present interest and of much promise in the future. Already several brilliant surgical operations have been performed upon indications derived from the newly acquired knowledge of cranio-cerebral topography. By this term we mean the determination of the relations between the external surface of the skull and the principal gyri and sulci of the brain. So little was done toward ascertaining these relations that up to 1861 the position of the fissure of Rolando relative to the coronal suture was wholly unknown. In that year Prof. Broca invented a scientific procedure for the study of the subject; he inserted pegs into the cerebral substance through holes drilled into the skull at given points, and then, removing the skull-cap carefully, was enabled to determine exactly what convolutions corresponded to the pierced regions of the skull. He thus discovered that the parieto-occipital fissure lies under the lambdoid suture, and that the fissure of Rolando slopes backward, so that its posterior extremity is placed at more than forty millimetres behind the coronal suture. Since that year the subject has been thoroughly studied by Broca, Bischoff, Heftler (1873), Prof. Turner, of Edinburgh (1874), Ch. Féré and Broca (1875), and others. Perhaps the best and most applicable of these contributions is that of Féré, and I shall follow it closely in the following remarks. It should be borne in mind that for purely anthropological purposes the determination of the relation of gyri and sulci to certain sutures or processes of the bare skull is sufficient; but that for use in the regional diagnosis of cerebral injuries, and in practical surgery, the cranial landmarks should be such as are easily determined upon the scalp and face in the living man. The *résumé* of cranio-cerebral topography which I offer for your guidance is based upon the latter principle of study.

As shown in Fig. 10, I shall sketch the situation of the principal convolutions, fissures, and central gray bodies of the cerebrum upon an outline figure of the profile of a skull. The skull is represented as resting upon a peculiar plane, one passing under the condyles of the occipital bones and the alveolar processes of the superior maxillæ—the alveolo-condyloid plane of Broca. Upon this horizontal line, which can be determined with reasonable accuracy in the living human being, we erect other lines and measure distances which enable us to solve almost the whole problem.

1. A vertical line (A) drawn from the alveolo-condyloid plane through the external auditory meatus upward will pass through or very near to the bregma or line of junction of the frontal and parietal bones at the vertex; it passes through the anterior (lower) extremity of the fissure of Rolando.

2. If from the upper end of this vertical line A, we measure a distance of 45 mm. backward toward the occiput and draw a descending vertical line (1–2), we mark out the location of two most important parts of the cerebrum, viz., the posterior extremity of the fissure of Rolando, and the posterior limit of the thalamus opticus in the hemisphere [at *c*)].

3. To conclude with the occipital end of the skull; if we can make out with the finger the lambdoid suture at the median line, we thus learn the situation of the subjacent occipito-parietal suture, which separates the parietal and occipital lobes.

4. The last vertical line worth noting is one drawn at a distance of 30 mm. forward of the auriculo-bregmatic line. This vertical line (3–4) will pass through the middle fold of the third frontal convolution (just forward of the speech-centre), and will also indicate the anterior limit of the central cerebral ganglia, viz., the head of the nucleus caudatus in the hemisphere [at (*d*].

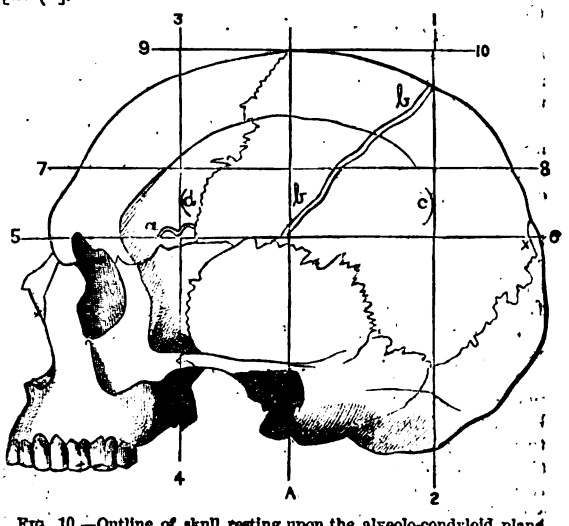

FIG. 10.—Outline of skull resting upon the alveolo-condyloid plane of Broca; modified from Topinard (*Anthropology*). Vertical line A, or auriculo-bregmatic. Line 9–10 drawn parallel to the plane of Broca. Upon this line, at a distance of 45 mm. posterior to the bregma, a vertical line, 1–2, will pass through the upper (inner) end of the fissure of Rolando, *b b*, and through the posterior extremity of the thalamus opticus, *c*). A third vertical line, 3–4, drawn at 30 mm. forward of the bregma, will pass through the fold of the third frontal gyrus, *a*, and through the head of the nucleus caudatus (*d*. The horizontal line 7–8, at 45 mm. below the bregma (scalp), indicates the upper limit of the central ganglia. The third horizontal line 5–6, passing through the external angular process of the frontal bone and the occipito-parietal junction, approximately indicates the course of the fissure of Sylvius, and serves for measurements. At 18 or 20 mm. behind the ext. ang. process on this line is the speech-centre of Broca: 5 to 8 mm. behind the intersection of 3–4 and 5–6, is the beginning of the fissure of Sylvius, and at 28 or 30 mm. behind this intersection is the lower end of the fissure of Rolando, *b*, *b*, placed a little too far back in the cut. At × (near 6), near the median line, is the location of the occipito-parietal fissure.

5. The upper level of the central cerebral ganglia may be quite exactly indicated by a horizontal line drawn at a distance of 45 mm. below the surface of the scalp at the bregma (or 35 below the surface of the bare skull at the same point). This line (7–8) also runs across the middle regions of the motor district of the convolutions, containing centres for the face and upper extremities.

6. The external angular process of the frontal bone, not difficult to define in the living subject, is the

*Delivered at the College of Physicians and Surgeons during the months of December, 1877, and January, 1878.

starting-point of another horizontal line (5–6), whose posterior extremity passes a little below the lambdoid suture. Upon this horizontal line we can, by measurement, determine the location of certain parts. Thus, at a distance of 18 or 20 mm. behind the external angular process lies the folded part of the third frontal convolution (*a*). This point in many heads will correspond with the vertical line 3, 4.

7. The situation of the fissure of Sylvius may be approximately ascertained in the following manner: Its middle portion extends horizontally, almost under the upper part of the squamous suture, which in the living subject is to be found a little below the horizontal line 5–6. The anterior extremity or beginning of the fissure of Sylvius is a little below this horizontal line, at a distance of some 5 to 8 mm. posterior to the intersection of 3–4 and 5–6, and consequently about 22 or 25 mm. anterior to the auriculo-bregmatic line A. Lastly, according to Turner, the parietal eminence almost always overlies the supra-marginal gyrus (P_3, Fig. 9), consequently the posterior extremity of the fissure of Sylvius is likewise in this vicinity.

8. The angular gyrus is to be found below and behind the parietal eminence, a little above the horizontal line drawn from the external angular process (5–6).

9. The anterior (lower) end of the fissure of Rolando lies at a distance of 28 or 30 mm. behind the line 5–6, and a little above it. It is therefore a few mm. anterior to the vertical line A.

The application of these data to practical medicine and surgery is quite obvious.

In medical cases, when tumors of the skull develop externally, we may determine by cranio-cerebral topography whether their extension inward can give rise to the motor symptoms which are present (convulsions and paralysis), according as the excitable districts of the brain are threatened by extension of the growth from the inner surface of the skull, or not.

In surgery, the utility of cranio-cerebral topography is much greater.

For example, as far back as 1871, Professor Broca was able to correctly diagnosticate an abscess of the left third frontal convolution, and was successful in trephining directly over it. In 1876, Proust and Lucas-Championnière successfully trephined the skull, in two cases, for the removal of fragments which were compressing the ascending frontal and parietal convolutions, and causing paralysis.

In the case of a patient who is paralyzed on one side of the body, after an injury to the skull, the following considerations might justify, or contra-indicate an operation for the removal of bone, of blood, or of pus:

1. If the hemiplegia (or hemi-spasm) be very complete, it is probable that the injury to the brain is considerable in extent, and extends deeper than the special centres for the face, arm, and leg.

2. If the externally evident injury be over non-excitable convolutions, and the paralytic or spasmodic phenomena be marked, it is more than probable that the brain is torn or compressed at other points than under the seat of injury, and an operation is contra-indicated.

3. If the paralytic or convulsive symptoms be on the same side as the evident cranial injury, it is probable that there are cerebral lesions on the other side produced by *contre-coup*, hence interference will be undesirable.

4. Even if a cranial injury be directly over excitable convolutions, if the resulting paralysis or convulsions be accompanied by marked anæsthesia, an operation cannot be expected to do much good, because the presence of anæsthesia makes it highly probable that the white substance of the hemisphere (posterior half or third of the internal capsule) is involved in the lesion.

5. A favorable indication for trephining is when aphasia supervenes immediately, or in a few weeks after an injury to the skull in the region of the left third frontal convolution (see Fig. 10). It is extremely likely, in the first case, that a clot or spiculum of bone will be found compressing or lacerating the centre for speech; in the second, that an abscess has formed in the same part (Broca's case).

6. Another combination of symptoms which makes an operation desirable, and holds out a hope of its being successful, is when an injury to the skull over the fissure of Rolando on one side is accompanied by slight hemiplegia, or by paralysis of the face, or arm, or leg, or of any two of these parts combined, on the opposite side of the median line, without anæsthesia. Under such circumstances, the probabilities almost amount to certainty that the centres for (see Fig. 9) the face, arm, and leg are separately or collectively involved in the lesion (cases of Proust and Lucas-Championnière).

7. A contra-indication to operative interference, even in apparently favorable cases, would be symptoms of basal lesions, such as palsy of cranial nerves, neuro-retinitis, Cheyne-Stoke's respiration, and vomiting.

Addendum.—A number of corrections to the propositions in these lectures have been suggested by my friends, or have occurred to my own mind, but I believe that only one is worth inserting here. The other corrections and additions are right enough in a theoretical sense, but as I have tried to adhere to my rule of making no statement which does not receive support from several sources, normal anatomy, pathological anatomy, and clinical observation, I prefer not to publish them.

The correction which I wish to make is to the paragraphs *a*, *b*, and *c*, in Lect. V., p. 103, descriptive of the crossed paralysis caused by lesions of the crura. It should be added in each of these paragraphs that the lower part of the face is usually paralyzed on the same side as the body palsy, *i.e.*, on the side opposite the lesion. In case of a lesion involving both crura, the two halves of the face will be paretic.

THE GERM THEORY OF DISEASE, AND ITS PRESENT BEARING UPON PUBLIC AND PERSONAL HYGIENE.

A Lecture Delivered before the Philadelphia Social Science Association, October 17, 1878.

By JOS. G. RICHARDSON, M.D.,

Professor of Hygiene and Demonstrator of Histology in the University of Pennsylvania.

(Reported for The Medical Record.)

The devastating epidemic of yellow fever now raging in some of our Southern States has called forth so much discussion in regard to the nature of this and kindred maladies, that few persons of culture have failed to hear more or less in the last six months of the germ theory of disease.

This hypothesis, of which for more than ten years I have been an earnest advocate, notwithstanding its unpopularity both within and outside of the medical profession, has, in consequence of some recent dis-

coveries, begun to be received into favor by many physicians, although many more still look upon it with distrust, if not with contempt.

Hence, without attempting to convert you all to a faith in the absolute truth of its tenets, I believe the time has now come for me to point out exactly what its doctrines are, to enumerate the chief facts which form their support, and to indicate the precautions which, if we admit it is probably true, wisdom enjoins upon us towards preventing the propagation and spread of disease.

In order to render myself clearly understood, I will begin by explaining, in the first place, that the germ theory of disease, which was originally propounded by the celebrated Linnæus, the father of botany, more than a century ago, but has since been somewhat modified by its successive advocates, professes to account for the phenomena of small-pox, yellow fever, typhoid fever, relapsing fever, measles, scarlatina, diphtheria, chicken-pox, erysipelas, etc., by attributing them to the more or less mechanical irritation and other disturbances set up by masses of spores and mycelial threads developing in the blood and in the affected tissues. The period of incubation or hatching out (by which is meant the time between exposure to small-pox, for example, and the development of the complaint) is supposed to correspond with that required for the germination of these spores or seeds of the fungi. The gradual increment of the symptoms is attributed to the growth of the millions of minute fungoid plants, whose period of greatest luxuriance marks the acme of the attack, and the death and destruction of which correspond to the decline of the disease.

The contagiousness of the communicable maladies is accounted for very beautifully by the existence of the immense number of spores (the true seeds of disease) constantly produced in, evolved from the affected individual, and carried through the air of a room or house, either alone or attached to some of the innumerable epithelial cells which are constantly being rubbed off by millions from the surface of our bodies.

The general absence of second attacks is admirably explained by the hypothesis that the parasitic fungus on the first occasion has exhausted all, or nearly all, of some peculiar (unknown) organic ingredient in our bodies, which is absolutely requisite for its support, according to the very same law that will, as every farmer knows, cause his wheat to fail if he plants it repeatedly in the same ground, and neglects to secure a due rotation of crops.

At the outset of my plea in favor of this doctrine, let me say that, in spite of the bold assertions of certain enthusiasts and savans with whom zeal outruns knowledge, no really skilful microscopist will at present maintain that minute vegetable organisms found in connection with contagious maladies are as yet *proved* to have any definite relation to them as causes of disease.

Nevertheless, the presumption that such causal relation does exist is, in my opinion, so strong that I intend to ask you to accept (as far as is readily feasible) my judgment that it will be proved in the near future, and I therefore seek in this brief address to popularize the conception that contagious diseases are conveyed from one person to another by the transplanting of microscopically visible spores or seeds, which have a separate vitality of their own, each after its kind, and which are to be escaped just as we would escape hordes of animals or swarms of insect pests, by shutting them out or killing them off, before they can succeed in fastening upon our bodies.

All true philanthropists must, it seems to me, desire that humanity should benefit by this knowledge, even at the present hour, although the conservative opponents to the germ theory, whilst evidently wavering in their defence, are not yet driven into the last ditch on this side of complete surrender.

I believe, as I wrote some years since in regard to favus, a parasitic skin disease of children, "we see to-day the same old battle fought (in regard to this skin disease, and also to small-pox, diphtheria, and their cogeners) which fifty years ago was so strenuously contested by Biett and Morgagni on the one hand, and the microscopists on the other, in relation to scabies or the itch, at present universally admitted to be due to a minute insect, the acarus scabiei; and to the student of human nature it is a most interesting confirmation of the wise king's dictum, 'there is no new thing under the sun,' to observe how the same doubts, followed by the same objections, were urged against the parasitic character of the itch that are now put forward in opposition to the vegetable nature of the cause of ringworm or favus. Thus, Biett, Cazenave, Lugol, etc., denied *then* that even with the aid of microscopes of high power any insect whatever could be discovered. When, by a succession of lucky accidents, so many observers blundered into seeing the insect, that this position was no longer tenable, opponents to the parasitic theory changed their base of operations, and, admitting the occasional existence of the acarus, stoutly maintained that, instead of being the cause of scabies, it was a secretory product of that affection, and by no means a constant one. Finally, when proof that the whole disease could arise from the deposit of a single itch insect upon the skin of a previously healthy person became incontestable, the anti-microscopist took refuge in the assertion that in such cases 'the insect taken from the scabious vesicle, *being charged with the virus, the fluid of the vesicle*, by penetration of the cuticle, inserted this virus, and produced the disease,' as the inoculation of cow-pox is accomplished."

One of the strongest arguments against the doctrine that living germs can enter into the human organism from the alimentary canal is that derived from the *a priori* probability that the solvent action of the gastric and intestinal juices must destroy all vitality in the microscopic organisms which, on this hypothesis, constituted the morbific matter, the contagium vivum of disease. A fundamental step towards establishing the germ theory, therefore, was manifestly by proving that bacteria or analogous low forms of life could penetrate from the stomach to the blood, to be thereby carried into all parts of the system, and this I was, I believe, the first to demonstrate. My observations were detailed in the *American Journal of the Medical Sciences* for July, 1868, from which I extract the following as the most important:

"*Experiment 4th.*—At 7.45 PM., May 17, 1868, I drank four fluid ounces of water similar to that employed in the preceding investigations and containing multitudes of bacteria, estimated as numbering 27.000,000.000. At a quarter past eight I examined a drop of blood drawn with the aid of a cataract needle from the tip of my finger and confined between a slide and cover cleaned with strong hydrochloric acid. Under the field of the one-twenty-fifth inch objective, the interspaces between the rows of blood-corpuscles were found to contain multitudes of apparently spherical molecules in rapid and erratic motion, but so very minute as to readily escape notice, even with this high power, except under the closest scrutiny; in the course of half an hour not less than

one hundred were observed. At 9 P.M. another drop of blood examined with the same precaution exhibited, in addition to these minute particles, other bodies less active in their movements, of much greater magnitude, and which, under an amplification of 1,100 diameters, appeared precisely similar to the bacteria I had been studying a few hours before in the identical decomposing beef-juice imbibed. Five of them were thus enlarged so as to exhibit an unmistakable organized structure totally different from their associated aggregations of Beales' germinal matter. Three of these bacteria were each about $\frac{1}{12000}$ of an inch in length, and $\frac{1}{25000}$ of an inch in width, very distinctly constricted in the middle; a fourth was obviously composed of four, and a fifth of six joints, arranged in a straight line, the motion of which was of that peculiar waving character so universal among the oscillatoriaceæ. The last two were most clearly visible when they happened to lie vertically to the surface of the glass, and would probably escape observation under the one-eighth inch except in that position, or be therefore mistaken for simple globular bodies, although in several cases I detected in the second and third experiments (with a lower power) a shadowy elongation of one diameter of the revolving molecule thus observed."

These results of mine were corroborated soon after by the researches of Dr. Neftel, of New York, upon some of the inferior animals, in regard to which he informs us (N. Y. MEDICAL RECORD, July 15, 1868, p. 226): "My experiments so far lead me to the conclusion that the lower vegetable organisms can continue to live and multiply in the tissues of living animals, and that they can enter into the general circulation either through the intestinal canal or respiratory organs, or by means of hypodermic injections. What is their ultimate fate in the animal organism, and what their importance in producing disease, further investigation will have to show."

M. E. Semmer, in Virchow's Archives, April, 1870, in his paper on the "Results of Injection of Fungous Spores and Fungous Cells into the Blood of Animals," gives additional corroboration of the conclusions to which I arrived by personal experiment.

Notwithstanding these and other investigations, the germ theory of disease made but little real progress, at least in English-speaking countries, until about three years since, when the researches of Prof. Burdon Sanderson and E. Klein, of London, as set forth in Mr. Simon's Report for 1874, as Medical Officer of the British Privy Council, commanded much professional attention, and doubtless led many who had previously ignored the theory to examine anew its claims to credibility.

In this report are endorsed the next two great steps towards the establishment of the germ theory, namely, the experiments of Oertel and Wassiloff, who showed that if the cornea of a rabbit is lightly pricked with a needle that has been thrust through diphtheritic false membrane, the wound does not heal up as similar tiny punctures with clean needles do, but becomes in a few days the centre of radiating streaks of brownish opacity, which, under the microscope are seen to be made up of colonies of the vegetable spores (micrococci) of diphtheritic disease. The other important step was the detection by Obermeier, of Berlin, of a minute fungoid growth (spirillium) in the blood of patients suffering with relapsing fever, a fact which Prof. Stricker, of Vienna, whose world-wide fame as a most skilful microscopist renders his testimony conclusive, told me only a few weeks ago he had fully confirmed.

These and other researches led Dr. William Roberts, of Manchester, England, in his annual address before the British Medical Association last year, to assert that the germ theory of disease "is now established upon a firm experimental basis, and if fairly grasped in capable hands, will very soon give us most important aid in our struggle with disease." And a recent eminent German writer on Pathology, Prof. Orth, late of Berlin, now of Göttingen, declares: "Of all the modifications which the blood undergoes, the least understood, and at the same time the most important, is unquestionably that which is due to the admixture with low organisms. Recent researches leave no doubt whatever that in some diseases the blood contains during life, though to a far higher degree after death, certain low forms of animal or vegetable life. Those organisms which have a thoroughly characteristic appearance can be detected without any great difficulty with very high powers, provided the layer of blood which is examined be very thin, or that the red corpuscles have been destroyed with acetic acid or alkalies."*

The latest, and perhaps most important, advance *towards* actual proof of the germ theory has just been made by my friend, Prof. E. Klein, F.R.S., of London, who, in a series of admirable investigations, partly communicated to the Royal Society in February, 1878, shows that a kind of bacterium found in the peritoneal exudation of pigs affected with a disease sometimes called typhoid fever (but more properly entitled pneumo-enteritis contagiosa), may be cultivated in different fluids outside the animal's body *for eight consecutive generations*, and then produce the original malady in healthy animals upon which it is inoculated.

The daily success of Lister's antiseptic method of dressing wounds, now firmly established in the London and many of the Continental hospitals, is a further and almost unanswerable evidence of the infective power of germs, and the wonderfully lucid explanations and ingenious experiments of Prof. Tyndall have done much to enable all to realize the intimate relation which exists between dust (which consists largely of germs) and disease.

It may not be amiss, before leaving this part of my subject, to reply to an objection which has been frequently offered to observations upon bacteria met with in connection with various diseases, namely, that such organisms, apparently quite identical, are often detected in absolutely healthy animals, and therefore cannot be causes of disease. Those who urge this argument, however, seem to forget that since the bacterial spores and rods are only the analogues of the seeds and roots of larger plants and by no means entire organisms, it is, therefore, no more reasonable to expect us to distinguish the bacterium which develops into the cause of yellow fever, for instance, from that which produces simple putrefaction, than it is to demand we should discriminate at sight the root and seed of a choke pear from those of a Seckel. In either case it may be only by cultivating the plant to its full perfection and testing its ripe fruit that we can determine its place in nature.

Abandoning, however, as I said before, all claim at present to certainty that the germ theory of disease is true in every detail, let us consider what modifications

* Dr. Orth describes the gray coating on wounds affected with hospital gangrene, and lining the uterus in puerperal fever, as being made up chiefly of micrococci and bacteria. He also asserts what I long ago believed and taught, that in metastatic abscesses, and probably in carbuncles and boils, the starting-point of the slough which forms the core is found in a small artery plugged up by a little wandering mass of micrococci or fungous spores.

of the ordinary sanitary precautions we can wisely adopt in view of the probability that bacteria or closely allied organisms are the actual causes of constitutional diseases.

In the first place, it seems to me that great benefit would result from its being understood by every man, woman and child that the contagion of small-pox, yellow fever, typhoid fever, scarlet fever, measles, diphtheria, cholera, etc., is probably composed of exceedingly minute seeds called spores, so small that a mass the diameter of one of the dots or periods (.) upon a printed page might contain over 50 millions.

Each one of these 50 millions of seeds is capable under favorable circumstances of reproducing its kind with almost inconceivable rapidity, so that supposing, for example, the zygodesimus of Prof. Letzerich is really the morbific agent causing diphtheria, a particle of the grayish false membrane which appears in the throat of patients ill with this complaint, although no bigger than the dot just mentioned, might contain separate seeds enough to infect every inhabitant of the whole continent of North America with diphtheritic disease.

The obvious deductions from these facts tend to strengthen the urgent recommendations of sanitarians that every effort should be made: 1st, to prevent these morbific germs from being let loose upon the world, and, 2d, when they have made their escape into the *free* air or water, to destroy all spores likely to come in contact with unprotected persons, that is to say, human beings, from whose bodies one crop of small-pox (or cow-pox) fungus, yellow fever bacteria, relapsing fever spirillia, etc., have not already been raised.

Each individal affected with small-pox or any other of the diseases above mentioned is according to this theory to be looked upon as a sort of *hot-bed* or forcing-house for the seeds or spores of that malady. From his or her body are continually given off in all directions by the skin, the breath, the perspiration, and the other secretions, millions of spores, of the extreme minuteness I have described, each one of which, if it were received into a human system under favorable circumstances, would rapidly reproduce itself and after a few days or weeks (corresponding, as already stated, to what is known as the period of incubation) give rise to a new case of the disease again—a new hot-bed of contagion for other unprotected organisms.

Now these pores, just like the seeds of larger noxious weeds which when allowed to gain a foothold in our fields and gardens propagate themselves with such immense rapidity, have no power to move of their own accord, and can only develop if they meet with air, moisture and congenial soil suited to their peculiar requirements. That is, if a small-pox patient is shut up in a germ-tight room so that the seeds cannot escape, or if whilst in the open air that air is stagnant so that no seeds are wafted away from the immediate neighborhood of the individual, or if when carried along by the wind they are blown away from any human habitation, are desiccated in a dry atmosphere, baked by the sun's rays or by artificial heat, frozen by extreme cold (as seems to be the case with yellow fever germs), or, finally, if they happen to meet with no persons but those who have had small-pox or been sufficiently vaccinated, in other words, if they do not "fall upon *good* ground," all this wealth of provision by which nature tries to secure this perpetuation of the poisonous plant causing small-pox in our systems proves unavailing and her malevolent design against our race, carried out with such a multitude of murderous weapons, utterly fails.

This brings me to a notice of one of the most mischievous popular errors which a general acceptance of the germ theory would necessarily subvert, namely, the belief that small-pox and other contagious maladies often arise without previous exposure to the seeds of disease. This doctrine, frequently advanced in private life as an excuse for neglect of proper care and caution in regard to children, etc., and occasionally sustained by public authorities as an apology for violation of quarantine and other sanitary regulations, is exceedingly pernicious, and our warmest gratitude would be due to the germ theory of disease, even should its establishment render no other service to humanity than the explosion of this fallacy. The fact is, as I firmly believe, that (inverting the scriptural aphorism) we can as little gather thorns from grapes or thistles from figs, as we can be troubled, for instance, with germs of yellow fever growing from clean cotton, or those of cholera developing from uninfected rice.

Putting aside the primary origin of diseases, which, with one or two doubtful exceptions, is a question of prehistoric time, the germ theory teaches us that every new case of the contagious maladies already enumerated is the immediate offspring of a preceding case, and the direct result of exposure of an unprotected human being to the chance of having the spores or seeds of disease implanted in its system. *an exposure which it only required sufficient knowledge, sufficient foresight, and sufficient care to avoid.*

In all such instances, indeed, isolation from unprotected persons, carried out with every due consideration and kindness, is therefore to be practised, if possible, and, under other conditions, means which will destroy the life of the spores, such as dry heat of high degree, superheated steam, prolonged boiling in water, caustic acids, or alkali, etc., are to be used with a firm confidence that if they are employed thoroughly enough they will absolutely put a stop to all spread of the disease.

A very important suggestion in regard to the use of disinfectants, arising from our knowledge of the germ theory, is that since these spores doubtless float in the atmosphere, as do the seeds of the thistle or dandelion, and are no more susceptible to the action of chemicals with which the air containing them is impregnated, it is useless to expect any certain and complete result from the milder aërial disinfectants as usually employed, that is, by scenting the medium in which they are suspended with carbolic acid, camphor, acetic acid, and similar non-corrosive agents.

As to the lesson we may deduce from these teachings in regard to public hygiene, I think its importance is only surpassed by its simplicity. For such contagious and infectious maladies it is: *Avoid at any cost the entrance into communities of living spores, or seeds of disease.* And this should be insured, not as in former times, with the mere hope that somehow we might escape the visitation, but with the absolute certainty that with proper care infection cannot occur. No doubt many of us have smiled at the story of certain terror-stricken authorities in a German town, who, when a single potato-bug was discovered in a field near them, immediately covered the whole plantation with straw soaked in kerosene, and setting fire to it, destroyed every vestige of animal and vegetable life for acres around. And yet, if we consider a moment, we realize the fact that this apparent waste of time, trouble, and potato-vines was the wisest and

most economical expenditure that could possibly have been made.

How much more, then, when our own lives and the lives of those that are dear to us, in addition to scores of millions of dollars, are at stake, as they are now in the South, should sanitary authorities be armed with almost despotic power, in order that they may shut out or kill every one of those actually visible, or even tangible, seeds of disease. Quarantine, disinfection, and prolonged detention of persons, with disinfection or frequently total destruction of goods from infected districts, is, it appears to me, the *right* of the many at the expense of the few; and even if, as I should advocate for the sake of strict justice, ample compensation for loss of time and loss of property were allowed by law to those who suffered, I believe the community at large would be tenfold better off pecuniarily, to say nothing of the far more important saving of human life and human suffering, which would be secured.

Reports of Hospitals.

BELLEVUE HOSPITAL.

Notes of Treatment and Peculiarities in Practice.

THE TREATMENT OF TYPHOID FEVER.

In looking over the records of cases of typhoid fever in Bellevue Hospital, the wide variety of treatment is quite noticeable. Even in the past eight years the gamut of therapeutics has been quite well run through, reaching from ninety grains of quinine a day and baths every hour to simple expectancy with milk and egg diet. Considering the class of cases, the results have been satisfactory as regards final cure, and seem to show this at least very clearly, that the system in typhoid fever is quite tolerant of tentative therapeutics.

As the treatment of this disease, so far as active measures are concerned, is still far from being settled, some examination of the cases at Bellevue may not be uninteresting.

The patients are chiefly laborers and domestics, and have been healthy and hard-working persons. Most of them are found to have been living in poorly ventilated, crowded tenement-houses, and they often give a history of there being stinking sewers or water-closets, or bad smells in the vicinity. Very rarely another case of typhoid fever has been in the same house or family. Sometimes the disease has originated in the hospital. In one case the patient had been lying in a bed by the entrance to the water-closet. In another she had been for over a week in the cells for female alcoholic, hysterical, and insane patients. The cases are brought in, or oftener walk in, at about the sixth or seventh day of the disease. They have been trying to keep at their work, and have been living on ordinary diet.

They are put to bed, and papules appear on the next day. Within the last two or three years the only precaution taken against contagion is to disinfect the stools. This is done generally with sulphate of iron, which is placed in the bed-pan previous to its being used. Commercial muriatic acid diluted is poured into the pan after the passage. The stools being disinfected, no further attempts at protecting the house-staff, nurses, or other patients are employed. The old idea that there is infection and danger in the patient's breath is disregarded, if at all believed in. The house physicians examine the lungs for evidences of pneumonia or bronchitis several times a week, they bend over the patients in examining the tongue and abdomen, and must inevitably inspire some of the patient's exhalations. No case of typhoid fever has occurred among the staff for several years.

The class of cases is in no respect unique as regard symptoms. There are mild and severe forms; there are obstinate diarrhœas; there is uniform constipation; delirium so wild as to oblige transfer from the wards; temperatures running to 106° and 107° or keeping as low as 102° and 103°. It is not often that the initial temperatures can be obtained. In cases where they have been, there has been no such characteristic rising as is described by Wunderlich and the German observers, though there is often a gradual rise in the first week.

The treatment at present in vogue is that of quinine and baths. This was begun four or five years ago, and has received such favor that it is quite the routine now. The quinine is given differently. Perhaps the most popular way has been ten grains two or three times a day, the evening dose being doubled if the temperature rises above a particular height, say 105°. It sometimes causes gastric irritation, being given in powder form. If it is vomited, pills are tried, and finally double doses by rectum. Quinidia was used for a short time, and it reduced temperature like quinine, but irritated the stomach more. Baths in every shape are used, but the sponge-bath is the form most adopted. The patient's temperature is taken; if found above a certain height, he is stripped either entirely naked, or perhaps only the upper half of the body. He is then sponged over with water at a temperature of from 60° to 80°. If only half the body is uncovered at a time, that part is allowed to dry and it is then covered and the rest of the surface sponged. This process is kept up for fifteen minutes. If that is insufficient to reduce the temperature, it is prolonged to half an hour. It is repeated every one, two, or three hours, according to the result obtained. At the end of the bath a little whiskey is generally given.

The effect of the quinine on the temperature is to reduce it slightly in a considerable number of cases. Its effect on the patient is to produce nausea, and vomiting in a smaller number. Its effect on the disease we will consider later.

The sponge-baths are almost always pleasant to the patient, if not too frequently repeated. If given every hour, or two hours even, they seem to weary and annoy him. They certainly reduce the temperature in most of the cases. In a small number of these the reduction seems to last for many hours. Sometimes two or three baths given in the afternoon and evening reduce the fever two or three degrees, and it keeps down for twelve hours. But it is not very rare that the baths are given every hour even, without producing very marked effect. The sponge-bath is a much more efficient antipyretic than quinine. The wet pack is hardly used now. In one case where it was employed pneumonia complicated the disease. The plan of placing the patient in water at a temperature of 98°, and then gradually lowering it, has been tried a number of times, and so far no deaths can be traced to it. In this respect the result differs from the application of the same therapeutic agent to pneumonia. Cold baths kill Americans when they have that disease. But these gradually-cooled baths are uniformly annoying and depressing to the patients. They

don't like them. Neither have they been proved to reduce temperature permanently any better than the sponge-baths do.

Several cases were treated this fall upon the Kibbe bed. Its action and effectiveness were similar to immersion in the bath-tub. It did not eliminate the fever from the disease, nor were the patients pleased with the moist luxury of its antipyretic appliances.

The use and value of cold water and quinine are quite uniformly taught at the Bellevue Hospital clinics, and the students there assembled probably go away in the belief that with a moist sponge and quinine pills the mortality rate of their typhoid cases will be wonderfully lessened. There is nothing in the statistics of the cases that have been thus treated at Bellevue Hospital to warrant such confidence.

The antipyretic treatment began to be popular in 1873, and it has gradually become more uniformly adopted in the wards since then. In 1873 and 1874 there are records of twenty-three cases. Of these, three died, or about thirteen per cent. Of those that died, two had a regular antipyretic treatment of quinine and baths, and one of them died from hemorrhage. The third had quinine only, and died from a complicating pneumonia. Of the cured, eleven had only mineral acid or some refrigerant drink; five had quinine in antipyretic doses and three had both quinine and baths. This record does not prove much in favor of the new treatment.

In 1877, and up to October, 1878, there are records of thirty-eight cases with fourteen deaths. Three of the fatal cases were brought in either moribund or so exhausted by previous neglect that they should not be reckoned in the percentage of mortality. This would then be twenty-nine per cent. Of these thirty-eight cases, thirty-four were treated antipyretically, twenty by quinine and baths and fourteen by quinine alone. Of those who died four had hemorrhages and one perforation; the rest died from paralysis of the heart. Of twelve cases found recorded in the year 1868, all were cured. The treatment was expectant, with perhaps a mineral acid or spirits mindereri.

At the Massachusetts General Hospital, from 1828 to 1836 inclusive, there were two hundred and nineteen cases, of whom thirty-one died, or about fourteen per cent. The percentage given for the hospital at other times, and previous to antipyretics, is thirteen.

At Bellevue Hospital, in the years 1868, 1873, 1874, 1877, and 1878, there were seventy-three cases. Of those treated antipyretically, twenty-four per cent. died; of the others, twelve per cent. died. Out of this seventy-three, of the seventeen that died, five had hemorrhages, two perforation, three were brought in moribund and are not reckoned in the percentage, while one had a double pneumonia. Of these seventeen there were six who had no antipyretics applied; one of these had a hemorrhage. Of the other eleven, four had hemorrhages, two perforations, one a double pneumonia. In September last two cases were treated successfully on Kibbe's bed.

It will thus be seen that since the introduction of antypyretic treatment into Bellevue Hospital the percentage of mortality has doubled; and further, that the mortality is nearly twice as great as the averages given by Jackson and Murchison. We do not, however, place any overestimate upon the value of these statistics; but at their very lowest it seems reasonable to assume that they do not prove the value of the antipyretic treatment.

The theory of this treatment, as is well known, is based on the belief that eighteen or twenty days of an average temperature of 104° will cause degeneration, and possible paralysis of the heart, or a like effect upon the brain. Also upon the belief that the frequent and energetic abstraction of heat will at length reduce the quantity generated. As regards the first point, it is perfectly well established, that a human being, with the digestion not seriously impaired, can live for five weeks at a temperature of 104°. Those who have watched cases of catarrhal phthisis, with a high temperature for months, must wonder how only ten days of the extreme temperature of typhoid can be so very pernicious. It may be that caloric is proportionately much more vicious at 106° than 104°, and that digestion and assimilation are much more impaired. We are not attempting to refute antipyretics, but only to show that, perhaps, in America its value is not proven.

Niemeyer expresses much delight at the discovery of the gradually cooled bath. Wet packs, he admits, while they abstract heat, increase its production also. On the contrary, the baths, he asserts, not only abstract heat, but reduce the production thereof. How they achieve this marvellous superiority he does not explain; nor have we been able to find any one who could make it clear. Practically, the baths are as exhausting as the wet packs. The percentage of relapses, it is not denied, may be increased by their use. In the only case with relapse among the seventy-three at Bellevue, baths and sponging were most energetically used. The possible increase of danger from intestinal hemorrhage is also admitted by the Germans.

Of twenty-four cases treated at Bellevue by baths and quinine both, two had hemorrhage. Of fifteen cases not having antipyretic treatment, one had intestinal hemorrhage.

The antypyretic treatment of typhoid fever by baths and quinine, then, has not been proven to be of certain therapeutic value in one large American hospital, and as no small number of students carry away many of their therapeutic beliefs from clinics in that institution, we think it not improper to state the facts which may lead them to suspend their judgment for a while.

In our reading and recollection of the cases at the hospital, it has seemed that quinine and its possibly attendant emesis are not proven to be necessary. It does reduce the temperature in some cases, but generally in those where the disease is mild and the reduction not necessary. As for the baths, as long as sponging off the surface is grateful to the patient, it is useful in the disease. The further and more energetic use of water, then, has yet to be shown of value, in all ordinary cases. The employment of mineral acid and of symptomatic remedies is sufficient.

THE USE OF JABORANDI AT BELLEVUE HOSPITAL.

Within the past year or two jaborandi has become a very popular and useful drug at Bellevue. In uræmia and in acute and chronic parenchymatous nephritis, it has accomplished especially good results.

In uræmia it is a very effective substitute for the old hot-air bath, acting more quickly and surely. As it has been shown to increase markedly the excretion of urea, it is probably more efficient also than the baths in relieving uræmic phenomena. A patient was brought into the hospital some weeks ago, suffering from convulsions and delirium. She had no œdema, but her urine was nearly solid with albumen, and contained small casts and blood. She was given a drachm of the fluid extract of jaborandi, hypodermically, and ℥x. of Magendie's solution. In fifteen minutes she was sweating profusely, and the convulsions had ceased. She was restless and wandering in mind for

the next twenty-four hours, but had no other bad symptoms. A drachm of jaborandi was given every other day subsequently, and in a week the albumen had nearly disappeared from her urine, and she felt quite well.

Cases of chronic nephritis have been treated with the drug very satisfactorily. Some who did not improve or get rid of the œdema under digitalis and potassium have shown immediate improvement under jaborandi. It is given in drachm doses every other morning, the patient being kept in bed until dinner-time, when the sweating is over. It is better not to give it at night, as the bed-clothes become saturated with perspiration and sleep is disturbed and uncomfortable.

Jaborandi weakens the heart. It is dangerous when the pulse is poor and the system debilitated. If given to a patient in this condition with uræmia, he falls into a cold perspiration, and œdema of the lungs, coma and death follow.

Yet it has been used several times in the treatment of pulmonary œdema in doses of ℥x. to ℥xv. every one or two hours. The autopsies have shown the usual changes.

It has been used also in pleuritic effusions, but does not seem to "sweat out" the intrathoracic liquid very much. Besides, it produces a nausea and salivation not at all pleasant.

The drug loses its effect in some cases, and the dose has to be increased. The usual variety in its action has been noted. Sometimes it causes salivation only; most frequently salivation and diaphoresis. If the dose is carefully regulated, nausea and vomiting need not be a frequent complication. The urine is, in cases of chronic Bright's disease somewhat diminished in amount, unless renal congestion or an acute nephritis is complicating the case. Jaborandi has proved, so far, of most certain service in the chronic stages of Bright's disease and in uræmia brought on during its initial attacks. When an acute attack is lighted up on a chronically inflamed organ, and when the system has already become weakened and anæmic, the drug may be useful, but it will also be dangerous.

Progress of Medical Science.

Spaying for Fibroid Tumors of the Womb.—The removal of the ovaries for the production of the menopause has been again brought prominently before the profession by Goodell, in an article entitled, "Spaying for Fibroid Tumor of the Womb." The growth of these tumors, he says, and their morbid effects, are notably increased at each monthly flux, and notably diminished after the climacteric. Now, by the removal of the ovaries, the menopause is artificially produced, the sexual and periodic congestions of the womb lessened, and the blood rations of the growths shortened, placing the patient in the most favorable circumstances for the further treatment of the disease. Clinical experience has so far demonstrated the correctness of this logic, for the five cases collected have been followed by satisfactory results. Of these five cases, one was reported by Prof. Trenholme, of Montreal; two by Prof. Hegar, of Freiburg; one by Prof. Nussbaum, of Munich; and the fifth occurred in Dr. Goodell's own practice. In all the cases the operation was followed by the establishment of the menopause, the cessation of the pain and hemorrhages, and subsequent decrease in size of the tumor. Since this operation was first introduced by Battey, it has been performed thirty-three times, with eight deaths. In sixteen cases the organs were removed by the abdominal incision, with six deaths; in seventeen, by the vaginal incision, with two deaths; and this latter route Dr. Goodell recommends as the safer, adding that, should it be attended by failure, a resort to the former is always open, the abandoned vaginal incision being utilized for drainage. That the removal of both ovaries is not always followed by the change of life, Dr. Goodell cites twenty cases to prove; but seventy-eight cases, probably a very imperfect list, show that such change is the rule. The operation is but seldom followed by a loss of sexual appetite.—*American Journal of Medical Sciences*, July, 1878.

A New Nerve.—In a communication to the French Academy, Cyon claims that the eighth pair of cerebral nerves contain two nerves of entirely distinct senses—the auditory and the nerve of space (*Raumnerf*). He considers the latter the source of all our ideas of extension, and of the three dimensions of space.—*The Doctor.*

Chloroform Narcosis.—Wachsmuth, of Berlin, asserts that much of the danger from the administration of chloroform may be averted by adding to it twenty per cent. of oil of turpentine, which, he says, stimulates the lungs, and thus protects them against the great enemy of chloroform narcosis—pulmonary paralysis.

A Case of Hysterical Hæmoptysis.—At a recent clinic in the Pennsylvania Hospital, Prof. da Costa presented a woman with the hysterical diathesis, who had suffered from cough at various periods, but particularly during the preceding six months, and had had repeated pulmonary hemorrhages, on one occasion raising, it is stated, nearly a pint of blood. There was some consolidation without softening at the right apex, but otherwise the lungs were normal. The Professor believed the case to be one of hysterical hæmoptysis, basing his diagnosis on the presence of the hysterical diathesis, the irregularity of the menses, the even temperature record, and the absence of expectoration, except at the time of the bleeding. The consolidation at the right apex was, in his opinion, of inflammatory origin, and he confidently expected that it would disappear under treatment by chalybeates, good food, rest, and blisters.—*Medical and Surgical Reporter*, July 13th.

Aneurism of the Innominate Artery Cured by Tufnell's Method.—In July, 1877, a gentleman, while calling on Dr. Head, of Dublin, mentioned that he had a dusky spot, about the size of a five-shilling piece, on the chest below the right collar-bone. On examination a distinct pulsation was detected over this spot, and although there was no bruit, no double impulse, and no evidence of pressure on the trachea or the recurrent nerve, the diagnosis of aneurism of the innominate was made. The patient had suffered a good deal from neuralgia in the back and shoulder during the preceding two years, but at the time of the examination complained of little or no pain, except a burning sensation. The impulse slightly preceded the apex-beat of the heart. The patient was at once subjected to Tufnell's method of treatment, which consists in the horizontal posture, absolute rest, and a minimum of liquids, the food consisting as much as possible of solids, so as to diminish the quantity of blood, and at the same time keep up its healthy condition. No medicine was

given, except occasional small doses of aconite when the heart was beating too fast. The recumbent posture was faithfully maintained from the last week of July to the middle of October, when the patient showed signs of great restlessness, and was, in consequence, allowed to get up. Soon afterward he became sleepless and fell into a state of great mental depression, in which he terminated his life by throwing himself into the Liffey.

At the autopsy a solid tumor was found occupying the entire mediastinum, and firmly attached to the under surface of the sternum and the cartilages of the first and second ribs. The heart was slightly enlarged and flabby; the wall of the left ventricle was thin, and the cavity a good deal dilated. The aorta was very atheromatous, and dilated to an extent almost amounting to true aneurism. The original aneurism occupied almost the whole of the arteria innominata; its sac was filled with firm, closely laminated layers of fibrin, which were as thin as sheets of paper. At the back of the aneurism the vessels were pervious. Three or four inches farther down the aorta there was another small aneurism, the size of a walnut, which was also almost filled up with fibrin.—*Canada Med. and Surg. Reporter*, August.

On the Treatment of Acne by the Internal Administration of Sulphide of Calcium.—Dr. Howard Cane, of London, states that he has had very gratifying success with the sulphide of calcium in the treatment of acne. He tried it first as a *dernier resort*, because he knew that most, if not all, of the remedies commonly recommended for this troublesome affection must have been tried. The patient, a young lady, aged nineteen, had been troubled for five years with acne of the most severe kind, and during that period had been almost constantly under treatment, the disease becoming progressively worse. Her face, especially the forehead, was thickly covered with acne spots in all stages of development, the inflamed and suppurating papules being very numerous. The eruption was so thick that she was obliged, when out, to wear a veil, and it precluded her from entering society to any extent. Dr. Cane prescribed the sulphide of calcium in doses of one-tenth of a grain four times daily, with four grains of powdered loaf-sugar. At the same time he directed her to hold her face over a vessel of very hot water night and morning for some ten minutes or more, and then to rub the parts where the comedones were very thick with a towel, after which she was to apply a face powder of precipitated sulphur, colored with Armenian bole. He also regulated the diet, forbidding pastry, salt meats, stimulants, etc., and enjoining fresh, green vegetables and exercise in the open air. At the end of a fortnight there was some improvement, and the sulphide was prescribed six times daily. Subsequently the dose of the sulphide was increased every fortnight, until at the end of three months she was taking a grain six times daily, the improvement being meanwhile rapid and constant. From that time no fresh spots appeared, but she continued to take the sulphide for two months longer, gradually decreasing the dose to one grain per diem. By that time the black-topped comedones had all disappeared, and the complexion was very much improved, the slight scars left, which were at first red, becoming pink. Eight months afterward no fresh spots had appeared, and the scars were rapidly fading in color.

In the second case the acne was also severe, but it had existed for only a year. The same diet and face powder were prescribed as in the above case, but the sulphide was given at once in doses of one-quarter of a grain four times daily, and the dose gradually increased to a grain six times daily. At the end of six weeks the patient was nearly well, and in another month she was quite cured. She had taken the sulphide in all two months, gradually diminishing the dose during the last fortnight. Dr. Cane has also treated fourteen other cases in exactly the same way. The results in eleven of these cases were perfect, whilst in the remaining three, though great benefit was derived, the cure was not complete.—*The Lancet*, August 17th.

Healing of Pieces separated from the Human Body.—Two cases occurred in the clinic of Dr. Maas, in which pieces separated from the body were replaced, and had united. In both cases the nose was the portion injured, and in both the epidermis sloughed off, leaving the rete malpighii exposed. The pieces were sewed on with fine sutures, between which strips of adhesive plaster were applied, and, over all, oiled silk and cotton batting, to prevent evaporation and maintain warmth. The two following rules are drawn: 1. The piece separated must be kept warmed to the temperature of the human body. 2. It must be replaced, whether with sutures or adhesive plaster, or both, directly the flow of blood ceases. The nutrition of the piece is supposed to be maintained by the speedy re-establishment of circulation through its vessels.—*The Cincinnati Lancet and Clinic*, August, 1878.

Theory of Contagium.—In a paper read before the British Medical Association, Prof. J. Lane Notter gave a short *résumé* of the views held in relation to the spore theory of disease, and compared this with the chemical theory of contagium. To what may be termed the theory of solid particles, he does not object; but why, he asks, limit contagium so far? Why can it exist in no other form? Too much importance, he thinks, is attached to the coincident appearance of microscopic forms with certain diseases, ignoring purely chemical causes. Take, for example, a poisoned wound. If the bad consequences depended upon the introduction of such germs into the living body, one would say that more grave results would happen after sufficient time had elapsed to favor their further development; but this is notably not the fact, for we know that the virulence of the fluids is in proportion to their freshness, and, therefore, to their freedom from bacteria. In conclusion, he desires to impress upon all the necessity of persisting in their endeavors to rid the atmosphere of infective places of their chemical poisons, as well as of the spore or germ, regarding both as dangerous and injurious—calling in first Nature's great means, namely, diffusion, dilution, and oxidation, and supplementing these with aërial disinfectants, the action of which, though imperfect, is not to be condemned in the wholesale manner we have been accustomed of late to hear.—*British Medical Journal*, July 20, 1878.

The Monobromide of Camphor as a Hypnotic.—Fankhauser recommends the monobromide of camphor as a hypnotic in cases in which the narcotics proper are not borne, or in which they have lost their efficacy from long use. The doses required to produce sleep (he gives generally 2 to 2½ grains in powder) are entirely harmless; unpleasant effects—such as a feeling of fulness in the head, nausea, excitement—occur but rarely, and even then are only transitory. In most cases the drug is well borne, even though gastric catarrh, cardialgia, etc., exist. The hypnotic effect follows rapidly, as a rule; and in many cases, even when the drug has been used re-

peatedly, lasts for a considerable time. It other cases it passes off in a relatively short period. In some cases these small doses failed to produce sleep, but it is probable that larger doses would have been more successful. Three and three-quarter grains, and even more, have been given without injury.—*Deutsche Med. Woch.*

On the Use of Carbolic Acid in Surgical Dressings.—Bryant saw severe collapse occur in two cases, as a result of the external application of carbolic acid. In one of these cases he had used a twenty per cent. solution of the acid in oil for a slight wound, and in the other a ten per cent. watery solution to dress a resection of the hip. Both cases recovered after the acid was discontinued; the urine soon became clear again. Hence he discards carbolic acid as a surgical dressing. Howse, however, claims that Bryant erred in using such strong solutions of the acid. He has himself used it for seven years in the proportions recommended by Lister (five to ten per cent. for carbolic oil, two-and-a-half to three per cent. for the watery solution used as an irrigating fluid), and has never met with any alarming symptoms. The discoloration of the urine, which appeared in some of his cases, disappeared without treatment, and without necessitating the discontinuance of the dressing. He does not consider it necessary to stop the use of the acid unless albuminuria should set in, in addition to the discoloration of the urine.—*Guy's Hospital Reports*, 1877.

Incubative Period of Scarlet Fever, and of Some Other Diseases.—Dr. Murchison read an abstract of a paper upon this subject at a recent meeting of the Clinical Society of London. The article was based upon observations made in seventy-five cases, and extending over a period of twenty years. Observations upon the incubative periods of small-pox, varicella, measles (about ten days), whooping-cough, typhus fever (supplemental to observation published some years ago in the *St. Thomas' Hospital Reports*), enteric and relapsing fever were given, but with the result that in none of these diseases was the period of incubation fixed. The eruptive fevers in this respect fell, however, into two classes: one class comprised variola, varicella, measles, typhus, enteric fever, relapsing fever, mumps; these had a long period of incubation, whilst erysipelas, diphtheria, dengue, and scarlet fever had a short incubative period. The incubative period of scarlet fever is variously given, at from two days to one month, but Dr. Murchison published in the *Lancet*, in 1864, an analysis of twenty-three cases, in none of which did it exceed one week. The present paper comprised twenty-five cases, in two of which (cases of two children on shipboard), the incubative period was very short, in one not exceeding eighteen hours, in the other being less than twenty-four hours. In the well-known case at the West End, some few years ago, where guests at a dinner party were subsequently attacked by scarlet fever, there was no incubative period longer than five days. In fact, in none of Dr. Murchison's seventy-five cases was the period longer than six days; in forty-four it did not exceed four days, in sixteen it did not exceed two days, and in fifteen it was not over twenty-four hours. Dr. Richardson's personal experience, Trousseau's case, in which the incubative period was seven or eight hours, and other well-recorded cases of short incubative periods, were given. The conclusion drawn from these cases is that if a person, after exposure to scarlatinal infection, be subjected to a week's quarantine, and in that period shows no symptoms of having been infected, he is safe. Dr. Murchison has adopted this rule, and has never known it to fail. With regard to the point whether it is possible for the patient to communicate an infectious disease during the incubative period, Dr. Murchison gave some instances of small-pox, which render it probable that such might be the case.—*The British Medical Journal*, June 29, 1878.

Dangers in the Use of Tinned Fruits.—The following will be of interest, not only from the medical value of the suggestions thrown out, but also from the possible effects it may have upon a large and increasing branch of our national industries. It is taken verbatim from a communication to *The Lancet* of July 13, 1878, from the pen of W. N. Hartley, F. Inst. Chem., F.R.S.E.:

"Having lately had occasion to examine some liquid vomited during sudden sickness, with the view of detecting a poison of an unknown nature, either organic or metallic, I submitted it to a very complete chemical analysis. The absence of any poisonous alkaloid was proved by the method of Stas. Arsenic, antimony, and mercury were proved to be absent, as well by Reinsch's process as by subsequent operations. A small quantity of a brown metallic sulphide was obtained, soluble in sulphide of ammonium, and reprecipitable from this solution by acids. The actual amount of precipitate was inconsiderable, only sufficient, in fact, to cover a very small filter. It was impossible to attempt any quantitative estimation of this substance, but it was decided to put its identity beyond doubt. This was done by reducing the sulphide to the metallic state, by means of the blowpipe. The minute globules of metal, which could not have weighed more than a few thousandths of a grain, possessed the color, hardness, malleability, and other properties of metallic tin. The minute quantity found was that only which had escaped absorption by the system, and in all probability much less than the whole amount taken. Having no further information concerning the case, I cannot say decidedly what was the source of this metal, but I was previously aware that it is occasionally present in the juice of fruit preserved in tins, as, for instance, peaches. My friend, Dr. C. R. A. Wright, Lecturer on Chemistry at St. Mary's Hospital, informed me that he had detected it in the remains of a can of fruit, to the eating of which in a tart an attack of sickness was attributed. One of the students in the chemical laboratory of King's College—Mr. A. E. Menke—has lately been estimating under my direction the amount of metal present in two or three samples of tinned provisions. In the syrup from a tin of pineapple, of about a pint in capacity, there was found a grain of tin. In a large tin of apples, a little less than four-one-hundredths of a grain, and in the liquor from a tin of lobster, mere traces of the metal, were found. (See *Chemical News*, July 6th.) No information of importance concerning tin-poisoning has been recorded; hence it is difficult to say what quantity of the substance may be looked upon as dangerous. It will be advisable in future to throw away the syrup contained in fruit tins, and indeed the whole contents of every such vessel, the surface of which is at all corroded. Regarding the cause of the occasional solution of the tin, a careful examination has shown that at the point where the drop of solder seals the aperture made for the escape of steam during the preserving process, a galvanic action is set up between the lead of the solder and the tin of the tin-plate. A possible remedy exists in sealing the can with a drop of pure tin."

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE ADULTERATION OF MILK.

THE Health Commissioners have applied for a fund sufficient to meet the expense of the appointment of two inspectors of milk, in addition to the one now in office. Not only the Board of Health but every physician in the city, must needs look with an especial interest at the coming Budgets of the Board of Finance. To many of those intimately acquainted with the sanitary condition of the city, especially of the lower and more densely-populated wards thereof, this effort on the part of the Board, in behalf of babes and pure milk, will appear very unsatisfactory, weak, and unavailing.

"Three inspectors to preserve the life, vitality, and nourishment of 150,000 children!" said an enthusiastic physician to me the other day. "Why, it will take a dozen capable inspectors to guard against the adulteration of milk—one of the greatest outrages of the day against our mild-mannered, long-suffering public."

But is the question really of sufficient importance to warrant the maintenance in office of even a single inspector? The whole question of the adulteration of milk has, of late years, assumed considerable proportions in this country, and has absorbed much attention on the part of physicians and sanitarians. In England, too, the question has received its quantum of discussion. The continental countries, which had not previously taken very much interest in the matter, are stirring, and Germany, hitherto, strange to say, the most backward of all, has at last become exceedingly active, and its sanitary authorities are now fully alive to the importance of the question, and many reforms are being extensively carried out which before were thought to be not only impracticable, but impossible.

When we consider the fact that of the 130,000 children in our metropolis under five years of age, nearly 15,000 die yearly, and that a large percentage of the deaths is due to intestinal disorders, the result of malnutrition, the conclusion is irresistible that the question of the adulteration of milk is of the most vital importance—calling for the earnest attention and consideration of the medical profession. Every intelligent physician will admit that with the exception of pure, fresh air there is perhaps nothing which conduces so much to the health of the infant as does pure milk.

The experience of the Summer Visiting Corps of Sanitary Inspectors in this city has demonstrated indubitably that poor, watery milk is a very active cause both in producing infantile diarrhœal disorders and in delaying recovery from an already existing attack. In addition to simple intestinal diseases, other affections may also be traced to the use of contaminated milk.

As early as the summer of 1873, Dougalls, of Glasgow, showed that milk very readily absorbs organic germs and that it also forms an excellent nidus for their proliferation.

Careful investigations into the origin of a number of epidemics of typhoid fever in England (the Marylebone epidemic is especially well known) leave very little doubt that they were directly due to the ingestion of milk which had been contaminated with the typhoid virus. The infection of the milk occurred either from direct adulteration with water which contained the typhoid germs, or from washing the dairy utensils with infected water. It is not improbable that this method of development of typhoid fever is even more frequent than at present suspected.

Again, epidemics of scarlatina are said to develop in a similar manner, but this statement needs more positive corroboration. Krebs, Gerlach, and a number of other pathologists, have expressed the opinion that the milk obtained from cows suffering from tuberculosis is capable of producing tuberculosis in the human being, and these views have been apparently substantiated by some recent experiments by Buhl.

The arraignment of contaminated milk as a disease-producing agent is thus seen to be sufficiently grave, even with our present imperfect and fragmentary knowledge of the question, to warrant a still greater interest than has hitherto been paid to the subject. Future investigations will probably serve to show that other infectious diseases are propagated in a similar manner to those already mentioned. The manner of preventing the infection of milk is a very intricate and perplexing topic, and is beyond the scope of our present remarks. We may, however, discuss this phase of the question in a future number.

An equally important matter—perhaps more so, because more within the bounds of our present knowledge—is the practicability of determining adulterations by the simple methods now employed by the Health Inspector. The chief interest centres practically in the adulteration of the milk by the addition of water, and by skimming. Both intentionally and unwittingly a great deal of unnecessary obscurity and confusion has been thrown around this question, but

the problem is essentially a simple one, and we need devote very little space to its consideration.

It is very evident that the whole question hinges chiefly on the utility of the lactometer. Is the specific gravity of the milk of healthy cows a sufficiently constant quantity to warrant any deductions drawn from its variations beyond certain well-known limits?

Quevenne, who is a perfectly competent and reliable authority, and whose testimony has not been contradicted, has analyzed 6,000 different samples of milk, and he has found that the specific gravity varied only from 1029–1033. Of course, there are a few exceptions to this rule, but the percentage of variation is very small, and its effect is practically entirely counterbalanced by the fact that the commercial can of milk in general use in the metropolis (and the suspected milk is always taken directly from the can) is composed, on the average, of the milkings of eight cows. If the specific gravity of the milk as tested by the lactometer (which is simply an urinometer graduated for milk, and which requires the same precautions in its employment as the latter instrument) falls below 1029, we may rest satisfied that the milk in question has been watered. If too much cream has been added to the milk, however, the specific gravity will also fall, and this test alone would not suffice to distinguish between the two. But the millennium is still in the distant future, and no milk-dealer has been found as yet who has pleaded guilty to the commission of such a heinous offence as the addition of cream to good milk. If, in addition to the low specific gravity, the milk looks and tastes watery, and runs too freely, we have sufficient evidence to prove its adulteration. In doubtful cases recourse may be had to the more tedious but, at the same time, more accurate method of direct chemical analysis of the amount of water present in the sample in question.

The detection of skimmed milk frequently presents greater difficulties. If the cream is removed, the specific gravity of course rises above the average, but the milk-dealer then adds a sufficient quantity of water to reduce it to the proper standard. The amount of cream may, indeed, be measured by the cremometer, but, unless the skimming has been excessive, the results of such an examination must be regarded with a certain amount of suspicion. The fact is that the addition of water to the milk causes the cream to be thrown up more effectually than in pure milk, so that a skimmed and watered article might show apparently the presence of as large a quantity of cream as does unadulterated milk. It appears to us that the employment of Heusner's Galactoscope, which is gaining favor in Germany at the present time, would be of considerable service in this dilemma. This instrument consists of two parts, one of which receives a 2 mm. thick layer of the suspected milk, while the other consists of a plate of "milk glass," whose translucency is equal to that of a layer of normal milk, also 2 mm. in thickness. The apparatus is then held up to the light, and attention directed to a dark line on the posterior surface of the instrument. If the milk contains too little cream—in other words, if it is more translucent—the line will be seen more clearly through the milk than through the plate of glass. This instrument is very simple in its application, and appears to us to be of considerable value as corroborative testimony. But in all cases of doubt, recourse must also be had to a quantitive chemical analysis of the amount of fat present.

The great advantage in the use of the lactometer and galactoscope is the readiness of their application. The latter instrument is at present only used in Germany, but the lactometer is employed in many of the large cities of France, Belgium, Switzerland, and Germany. In this city, also, it has done good work, and its testimony is no longer contradicted. If we remember that, in addition to the baneful effects of adulterated milk upon the health of the infant, it also formerly involved a daily loss to the community of several thousand dollars, we can form some conception of the magnitude of the reforms to be still undertaken, and we think that the Board of Health should receive the earnest moral support of the profession in their well-meant endeavors in this direction.

THE NATIONAL HEALTH BUREAU.

THE interest which is being developed in the bill to be presented to Congress in relation to the creation of a National Board of Health is quite significant of ultimate success. The arguments thus far have been altogether on one side, and seem to be unanswerable. In fact, we are not aware that any one opposes the measure. The only question at present seems to be, how can any proposed National Health bill be made most effective?

On a previous occasion we offered the suggestions of a framer of a bill, and invited comments from other gentlemen equally interested in the subject.

In another column we publish an amendment to the bill previously offered. The one in question is certainly more comprehensive than its predecessor, and will doubtless serve an excellent purpose.

Besides representing the Army, Navy, and Marine Hospital Departments, it is proposed that the presiding officer of the board be ex-officio a member of the Cabinet. The latter condition will bestow upon the board a becoming dignity and usefulness, and will raise it to an equal standing with the other departments of the general government. The manner of appointing the members of the board is, at least, until a better means is suggested, very commendable. The idea also of making it an advisory board to Congress does away with a great deal of red tape, and gives ample opportunity for suggesting action and giving aid in regard to the suppression of widespread epidemics. But as before remarked, the subject is still under dis-

cussion, and any suggestions are invited which may be practical in character, and may have a tendency to increase the efficiency of the proposed law.

When the required ground shall appear to have been covered in regard to proposals for perfecting the bill, the necessary steps will be taken to present the said bill to Congress.

Reviews and Notices of Books.

THE IDENTIFICATION OF THE HUMAN SKELETON: A Medico-Legal Study. Awarded the Mass. Med. Society's Prize for 1878. By THOMAS DWIGHT, M.D., of Boston, late Professor of Anatomy of the Medical School of Maine. 8vo, pp. 54, 4 charts. Boston: David Clapp & Son. 1878.

THIS little work is as well worthy of the attention of the expert as of the general practitioner. Osteology is indeed a "dry" subject as set forth in the text-books; but when dressed up for a special bearing upon legal medicine, and especially when so well costumed as by Dr. Dwight, enthusiasm supplants indifference. The questions: 1. Are these bones human? 2. Do they belong to one or more individuals? 3. What is the sex? 4. What is the age? 5. How long is it since death? 6. What was the height of the skeleton? 7. If certain parts are wanting, can we estimate their size? If so, how? are all answered entirely satisfactorily? Drs. Wight's, Bardeleben's, Sappey's, Cruveilhier's, Henle's, the author's, and others' tables and observations supply the basis for the rules laid down. Every point of importance in the study of the identification of the human skeleton may be found fully considered in this valuable little book. To all students of medical jurisprudence it shall prove of special interest and value upon the subject of which it treats.

THE THROAT AND ITS DISEASES. By LENNOX BROWNE, F.R.C.S., Ed. London: Bailliere, Tindall & Cox. 1878. 8vo, pp. xii., 351.

MR. LENNOX BROWNE, who, we believe, was for a number of years assistant to Dr. Morell Mackenzie, of London, as well as his surgical colleague at the Hospital for Diseases of the Throat, established by that gentleman, has had unusually favorable opportunities for studying diseases of the throat, the fruits of which have appeared in part from time to time in the medical journals, and are well collated and digested in the volume under consideration. The author's rare artistic skill has been utilized in the production of one hundred beautiful illustrations in colors, the very best of the kind we have seen, and which have been distributed in ten plates, so bound that they can be unfolded beyond the body of the book, for their convenient study during the perusal of the letterpress. Fifty wood engravings, designed and executed by the author, appear in the body of the work; these are unusually accurate, and the instruments are mostly drawn on a uniform scale of one-half size. After a few introductory pages detailing the plan of the work, which is very methodical, there is a short chapter on the laryngoscope and rhinoscope. Mr. Brown prefers the spectacle-frame reflector of Duplay for illuminating the pharynx; and for examining the anterior nares he gives the palm to the tri-valved speculum of Eddy, of New York, to which he has adapted a rack movement to keep it open at any desired point. The seven following pages are devoted to the anatomy of the larynx, illustrated by two outline sketches of the laryngeal image, one showing the bifurcation of the trachea, and one the view in phonation; the posterior portion of the rima glottidis in the latter being represented gaping—evidently a mistake. The chapter on the laryngoscopic and rhinoscopic image, which follows, is illustrated with two cuts after Mandl's plan, with sectional views of the parts with the mirror *in situ*, and adjacent designs of the laryngeal image produced by the position of the mirror indicated. The rhinoscopic image, which is reproduced in the colored plates, is one of the best we have seen, except so far as regards the pharyngeal extremity of the Eustachian tube. Then follows a chapter on the general semeiology of throat diseases, in which the various subjective and objective symptoms common to them are discussed seriatim. The therapeutics of throat disease are discussed in another chapter, with cuts of the various instruments found most serviceable in the author's practice. In discussing the use of forceps for the evulsion of morbid growths, Mr. Browne justly condemns as dangerous the large and powerful forceps used by Fauvel, of Paris, and prefers the more delicate instruments originally adapted to laryngoscopic surgery. He is evidently no friend to unguarded instruments, whether cutting or crushing, for fear of injuring healthy structure; and he extols the galvano-cautery, especially for specific cases, and figures a battery of his own device.

Coming to the subject of disease, a mere outline of prominent points is given, correct enough as far as it goes, but partaking rather of the nature of an index than of the details expected in a treatise. The symptoms are enumerated seriatim rather than described. In his discussions of treatment references are frequently made to formulæ which are collected in a number of pages at the end of the book. These are in great measure those of the Pharmacopœia of the Throat Hospital in Golden Square, in the preparation of which the author took part. The Latin is in the main correct, but we notice the universal use of the genitive instead of the accusative in indicating the total quantities. Thus, *aqua ad* should be written *aquam ad.* or; if the genitive form be preferred, it should be followed by *q. s.*, thus, *aquæ q. s. ad.*

Diseases of the pharynx and fauces are discussed in less than twenty-four pages, and as the type is very large, it may be inferred that the subject-matter is very much condensed and even fragmentary; and the same remark will apply to the whole practical part of the work, much of which is schematic rather than discursive. Brevity has been cultivated to such an extent, that, though attractive to the specialist, who is merely interested in learning the author's personal views and opinions, it can hardly satisfy the requirements of the general practitioner, for whom it is specially designed, if the latter be anything of a student. Phlegmonous pharyngitis is presented as synonymous with hospital sore throat. In the treatment of diseases there is nothing special to be noticed, except the frequent recommendation of natural mineral waters, so much commended by continental authorities. In the local treatment of chronic pharyngitis, the author advises destruction of the enlarged vessels which supply blood to the follicles, by means of a fine galvano-cautery point or the nitrate of silver after preliminary incision, within a short time after which the follicles are said to shrivel up and disappear. Direct destruction of the diseased follicles themselves is regarded as simply treatment of an effect without removal of a cause.

In the treatment of acute tonsillitis the author does not

recommend the steam or spray inhalation so much in vogue, or the local use of ice, but finds the most effective and agreeable local measure in frequent gentle gargling with warm water medicated with glycerine, carbolic or salicylic acid, or mere retention of the solution in the mouth from time to time.

Though opposed to scarification of an inflamed tonsil, he approves of the removal, during acute inflammation, of tonsils too small for excision in the intervals between recurrent attacks.

With regard to tuberculous laryngitis, our author evidently inclines to the theory of the primary development of tubercle in the larynx, and to belief in the characteristic appearances of its ulcerative processes as distinguishable from those of catarrhal, syphilitic, and other ulcerative inflammations, in which view he is not in accord with the present views of most laryngeal pathologists, who as a rule assert most positively that it is impossible to differentiate tuberculous ulceration of the larynx by the mere optical appearances alone. In adopting the view of Virchow, who recommended the larynx as the most appropriate place for the study of true tubercle, he neglects to add that distinguished pathologist's admission, that the evidence is very transitory. The subject of neoplasm in the larynx presents a bone of contention between the laryngoscopic specialist and the general surgeon, the former inclining to intra-laryngeal interference, and the latter to external operations, usually in the absence of skill for intra-laryngeal manipulation. Mr. Browne, who certainly ought to be able to speak by the card, states that, in attempts at removal even of benign growths from within the larynx, direct injury of healthy parts leading to fatal results is by no means of unfrequent occurrence. If this be more than exceptional, it can only indicate carelessness in an expert operator, or recklessness in an inexperienced one. He also believes that recurrence of laryngeal growths removed through the mouth is much more frequent than is generally supposed—an observation which presupposes either incomplete evulsion in the first place, or inefficient cauterization of residue afterwards. He furthermore asserts that benign growths not unfrequently assume a malignant and even cancerous character by the irritation produced through attempts at removal. While an occasional occurrence of this kind is beyond cavil, it is well known that mere local irritation, coughing and the like, produced by these growths, occasionally sets up malignant degeneration, even without operative interference.

This is the only argumentative chapter in the book, and seven pertinent propositions are discussed with considerable detail.

Our candid conclusion in regard to this division of the subject is that the excess of caution inculcated by the author is apt to lead to sins of omission rather than to sins of commission.

With brief chapters on malignant disease of the pharynx and larynx, and on neurosis of the larynx, the text concludes with a short section on the differential diagnosis of laryngeal disease, in which, after quoting from an admirable lecture on that subject by Dr. Morell McKenzie (*Lancet*, Jan. 6, 1872), the author appends an instructive analytical table of the prominent points of differential diagnosis. The typographical execution of the work is unexceptionable. The paper is good, the type attractive, the margins large, the illustrations well cut and accurate, and the proof-reading has been so good that we have not noticed any typographical errors; but the size of the book is very deceptive as to the amount of subject-matter. In conclusion, we recommend this beautiful volume as an acceptable addition to the library of those engaged in the treatment of diseases of the throat, and we trust that when another edition is called for the author will amplify his descriptions of disease sufficiently to embrace that detail so essential to a thorough exposition of the subject.

Transactions of the Medical Society of the State of New York for 1878.

Although containing a lesser number of papers than last year's volume, the communications are highly interesting and practical. Some have already appeared in the Record. By referring to the January 29, 1878, number of this journal, the reader will find on p. 72 *et seq.* a very satisfactory report of the regular business of the Society, as well as special reference to the "Report of Committee of Ethics" (p. 74), to the "Report Favoring the Passage of a Law Relating to Expert Testimony" (p. 75), and to the "Action of the Society with Reference to the Code of Ethics," all of which are of general interest and importance.

Dr. Eugene Beach, of Gloversville, read a short, crisp paper upon "A Case of Penetrating Wound of the Stomach, with Recovery." Allan McL. Hamilton, M.D., of New York, described a very interesting case of "Auditory Epilepsy" of the *perpendicular* vertiginous variety (as he expressed it), with the results of personal observation (see Record, Feb. 9, 1878, p. 107), a paper which will well warrant perusal, as well as Dr. Roosa's remarks thereon. Next comes Dr. Robert F. Weir's article on "Urinary Fistula in the Ante-scrotal Region," which appeared in the Record, April 13, 1878. Paper IV., "Clinical Observations Relating to Vaccinations during Attacks of Pertussis," by George Bayles, M.D., of New York, to the effect that vaccination has a marked arresting influence upon whooping-cough. Dr. Elisha Harris, of this city, read a highly important article on "Registration of Vital Statistics—Suggestions Concerning the Duties of Physicians in Certifying the Causes of Deaths, and in Reporting Prevalent Diseases and Preventable Causes of Mortality—Outlines of a Plan for this Service," urging the legal requirement of such reports. Dr. H. gives a blank form for such registration, which should be used in every State in the Union. Dr. Edward Seguin makes a plea for "More Uniformity in Physic and Pharmacy."

Article VII. is from the pen of Dr. Stephen Smith, of New York, on "Some Practical Tests of the Claims of the Antiseptic System;" see Record, Feb. 2, 1878, p. 94, for an abstract.

Article VIII., "Lacerations of the Cervix Uteri as a Factor in Some Forms of Uterine Disease, with Cases Illustrative of Treatment," by Walter B. Chase, of Windham, N. Y., which paper gave rise to remarks by Prof. Dr. Barker, Dr. H. T. Hanks, and Dr. Jacobi. (Record for March 9, 1878, p. 193.)

Maurice Perkins, M.D., of Schenectady, read a paper on the "Estimation of Urea," namely, by decomposing urea by soda hydrobromite in solution, collecting and weighing the nitrogen which is evolved, and making the proper calculation (*i. e.*, multiplying the number of cubic ctms. of gas obtained by .0269).

The next paper, by Dr. J. G. Richardson, Professor in the University of Pennsylvania, on "Improved Method for Detecting Leukæmia during its Early Stages, etc.," is quite interesting and suggestive. (Record, March 2, 1878, p. 165.)

Article XI., "Ischæmia of the Retina," is by Thos. R. Pooley, of New York, and a very interesting paper it is. Dr. Arthur Mathewson, of Brooklyn, adds to

the elucidation of "Diagnosis of Intracranial Tumors," and gives several cases in point.

Dr. E. R. Squibb, of Brooklyn, in a "Note on Hydrobromic Acid," urges uniformity of strength, and that the standard should be a 34 per cent. solution, equal, chemically, to one-half the strength of potassium bromide as to the bromine contained therein. Precise directions are given for the preparation of a solution of this strength. Some diseases of the "Salivary Glands," by Dr. D. H. Goodwillie, of New York; "Case of Intussusception, with Sloughing and Extension of a Portion of Small Intestine," by Dr. M. D. Benedict, of Syracuse; "Surgical Notes," by C. H. Giberson, M.D, of Brooklyn; "Scarlet Fever and Diphtheria in Brooklyn," by Dr. Francis H. Stuart, Registrar of Vital Statistics for Brooklyn; "Brooklyn Public Schools," by A. N. Bell, M.D., Chairman of Kings Co. Committee on Hygiene; and two other papers of the same character as the last, with Dr. L. Duncan Bulkley's article "On Diet and Hygiene in Diseases of the Skin," close the communications in this valuable volume. The last-mentioned paper is of great general and special value practically, and will amply repay perusal. Of course the usual list of members of the State, as well as of the several County Societies, appears.

The volume is well printed and handsomely bound, and will be a valuable addition to every physician's library, who may be so fortunate as to possess himself of a copy.

Correspondence.

THE NATIONAL HEALTH BUREAU.

To the Editor of The Medical Record.

Sir:—As Congress will doubtless be petitioned for the appointment of a National Board of Health, the following modification of the text of the bill published in your last issue is respectfully submitted:

I. That the board shall be known as the *United States Board of Public Health*. That its duties shall be to advise the General Government, Executive of each State, and Commissioners of the District of Columbia, on all matters relating to the prevention of disease and the improvement of the public health; to advise with and obtain information from the board of health of each State; to consult with the Superintendent of the Census with regard to the statistics of disease and mortality; to establish a standard of the qualifications of municipal and other health officers, analysts, and sanitary inspectors; and appoint boards for the examination of all persons charged with the care of the public health.

II. The Board shall prepare and present to Congress an annual report of its operations, with such recommendations as may be deemed advisable; and, when necessary, it shall appoint members of its own or of State boards of health to investigate disease or other matters specially pertaining to the public health.

III. The Board shall be constituted of one medical officer from the army, navy, and marine hospital services of the United States, and of three eminent physicians from civil life, a sanitary engineer, and a meteorologist or scientist, each and all to be selected for their special knowledge of hygiene and professional eminence.

IV. That the presiding officer of the Board of Public Health shall be *ex officio* a member of the Cabinet, and shall be selected by the President of the United States; that the medical officers of the government shall be selected by the Secretaries of War, Navy, and Treasury respectively, and the members so chosen shall select from the most eminent members of the medical profession, and recommend to the President of the United States for appointment, the other two members of the Board; that the President of the Board of Public Health shall select and recommend for appointment to the President of the United States a sanitary engineer and a meteorologist or a scientist of approved ability, one of whom shall act as Secretary of the Board.

V. That the President of the Board shall receive not less than $5,000 per annum; the two physicians from civil life, the sanitary engineer, and scientist or meteorologist not less than $3,000 per annum; and the officers of army, navy, and marine hospital services the pay and allowance of their respective grades.

VI. That to carry out the provisions of this act—to prevent disease, suffering, and death among the people of the United States—the sum of $50,000 per annum shall be appropriated by Congress to be disbursed and accounted for by the President of said Board, in accordance with its directions, and on vouchers and forms to be prescribed by the Secretary of the Treasury.

Medicus.

THE DETERMINATION OF SEX IN UTERO.

To the Editor of The Medical Record.

Sir:—The article of Dr. Swift, in the Boston *Medical and Surgical Journal*, reproduced in the last number of The Medical Record, will probably be quoted by the periodical press and a false theory circulated among the profession and the public at large. This theory is based on the following hypothesis: "The ovum represents the female elements, the spermatozoa the male. If the ovum becomes impregnated by *a few spermatozoa*, the female element will be in excess and the result a female. If, on the other hand, *a good many spermatozoa* impregnate the ovum, the male element will preponderate and a male will be the result." This hypothesis leads the author to deduce a theory by which we may be enabled to determine the sex in utero, and make use of the means of producing either a male or a female at will. He says further: "If the ovum is high up—in the ovary or at the fimbriated extremity of the Fallopian tube—probably only a few spermatozoa will come in contact with it, but if the ovum is low down, then the spermatozoa will be in excess." According to this the sex depends upon the time of coition.

Such a theory could never have been constructed if the following positive embryological fact had been taken into consideration: Modern researches have proved that a single spermatozoon is sufficient for impregnating an ovum, or to be more correct, that the ovum can be impregnated only by a single spermatozoon, because by a most perfect mechanism the ovum, after the penetration of a single spermatozoon, is entirely protected against the intrusion of any other. This is the case both in ova provided with a special opening—micropyle—for the entrance of the spermatozoon and in those destitute of a micropyle. Thus the assumption of an ovum being impregnated by *only a few* or *a great many spermatozoa* is absurd, and the false theory, with all its deductions, vanishes before this simple embryological fact.

Yours truly,

W. B. Neftel, M.D.

DR. MARION SIMS AND HIS OPERATIONS IN VIENNA.

To the Editor of The Medical Record.

Sir:—A cutting from the *Boston Medical and Surgical Journal* (not the journal itself) has been shown to myself and other physicians in this city, which consists of the following paragraphs:

"We extract what follows from a very readable letter to the Chicago *Medical Journal* from Vienna:

"'Dr. Sims's patients operated upon here all died of peritonitis within ten days of the operation. I remarked to the professor who related the facts to me that I supposed they selected desperate cases for Dr. Sims to operate upon. He replied that although the cases were bad ones that did not alter the fact that they had died of the direct effects of the operation.

"'Dr. Bozeman spent two months here in 1876, and I find a pretty general impression among the gynæcologists of Vienna that he is the more skilled operator of the two.

"'In the rivalry between these two eminent men, many here in Vienna think Dr. Sims has carried off more than his legitimate share of the professional laurels.'"

I think most would infer from the above paragraphs and the association of the two names mentioned, 1st, that Dr. Sims had operated for vesico-vaginal fistula in Vienna, and 2d, that all the patients that Dr. Sims operated upon in Vienna died of peritonitis within ten days of the operation.

All admit, whether personally friends or foes to Dr. Sims, that no one in this country has done so much for gynæcology as he, and all honorable men must regret to see even an unintentional injustice done him.

As Dr. Sims is now abroad, and therefore cannot immediately refute the wrong impressions conveyed in the above isolated paragraphs, I ask for space in the Record to say that, on looking at the Chicago *Medical Journal* for September, 1878, I find in the letter, from which they are quoted, that they are preceded by the following sentences:

"Dr. Marion Sims spent some time in Vienna during the past winter, the object of his visit being, as I am informed, to collect material for a new forthcoming edition of his work on Uterine Surgery. While here the doctor was of course considerably lionized and invited to perform gynæcological operations. Among those he did three for the removal of cancerous portions of the womb, by a method called by the Germans, '*Trichterformich Excision*,' which consists in cutting away with the scissors a funnel-shaped portion of the cervix uteri, extending, when necessary for the removal of the diseased tissue, into the body of the womb itself."

From the above it will be seen that the writer only asserts that three patients with cancer of the uterus died from peritonitis after being operated upon by Dr. Sims.

The character and high tone of the *Boston Medical and Surgical Journal* preclude all suspicion of "malicious intent" on the part of its editor or editors, and this gross injustice to Dr. Sims must have been the result of inadvertence, or accident of the "scissors."

It has seemed to me proper that this correction should appear in a journal of this city, the residence of Dr. Sims, as those who have seen the cutting might not see the refutation in the journal in which the misrepresentation originally was published, while at the same time, I cannot doubt that the *Boston Medical Journal* will gladly and promptly make the "*amende honorable*."

Fordyce Barker.

85 Madison Avenue, October 31, 1878.

THE QUARANTINE OF NATCHEZ, MISS.

To the Editor of The Medical Record.

Sir:—The accompanying letter from my brother, Dr. Orrick Metcalfe, of Natchez, may prove worthy of publication in the Record. If you think so, it is at your service. Very truly yours,

John T. Metcalfe.

October 17, 1878.

"We have all the roads into Natchez guarded. Not only the main roads, but every approach to the town, even by paths and bayous. It reminds one of wartimes to see a double line of guards, night and day, rain or shine, doing duty on their posts. We allow no one from an infected place, no matter how often he may have had the fever, to enter; nor do we permit persons from suspected localities to come among us. Should such be accidentally discovered they are made to leave at once. So unanimous are we that there is little difficulty in enforcing the rule; not even the most influential among the citizens daring to ask exemption.

"The matter of contagion (transportation) seems to be settled forever, so undeniable has been the spread of yellow fever by refugees. In this county (Adams) I have not heard of one case of the disease. Such dread has seized the people as to prevent, in many instances, the care and attention needed by the sufferers. Utter failure of treatment in so many cases has discouraged and demoralized both the lay and professional mind. One scarcely knows whether it promises more to be treated *secundum artem*, or by the theoretical notions of some experimenter.

"I was sorry to hear of poor Dr. Kibbe's death in New Orleans. I sympathize with every honest worker and am pained to hear of any such falling victims to theoretical convictions. The use of cold water I am not disposed to rely upon as a means of cure, after Kibbe's idea. It gives great comfort in certain cases, and does good. In others it becomes so painful that one has to give it up.

"Is it not strange that so much difficulty exists in the differential diagnosis? H., who was sent to a little infected village in the interior, called the fever 'bilious malarial,' although six out of twelve cases had died in a few days. *Unless yellow fever is prevalent* we never have cases of that sort in Natchez. A short time after the establishment of quarantine here there was a case that gave much uneasiness. The man had died, after an illness of ten days, having thrown up something like black vomit. He had had no medicinal treatment. Not being able to have a post-mortem examination otherwise, I made it myself, at 9 o'clock P.M., the physician who attended the patient not caring to do so. It was evident that the vomiting, etc., had been due to renal disease, such as existed in I.'s case. The statement of that fact had a very quieting effect on our panic-stricken people; for never has such fear of the fever existed before with us. How terrible is the situation of the poor refugees who are driven back to Port Gibson and Vicksburg by the fever, from which they had fled, breaking out in their places of refuge! It is hard to be sick in the country now, when experienced physicians are out of reach and supplies only of the simplest kind are attainable."

New Instruments.

CONTRIBUTION TO THE TREATMENT OF URETHRAL STRICTURE.

By ALEXANDER S. HUNTER, M.D.,

NEW YORK.

In commencing the treatment of a urethral stricture the choice of method and of instruments will depend on its condition, its size, and its location.

In every case, as stated by Gross, "there is associated with the contraction a subacute or chronic urethritis, which is a source of spasm and irritability, to the latter of which most of the reflected symptoms are due."

Experience teaches that the circular, wedge-shaped bougie, in commencing the treatment of all permeable strictures, is the best means not only of relieving these complications, but also of reducing the obstruction on which they depend.

The filiform bougie in strictures of small calibre, and especially if complicated with false passages, will generally serve an exceedingly useful purpose in conducting tunnelled bougies of increasing sizes through the contraction.

If, however, the stricture be a very close one, and the more especially if its walls be indurated as well as complicated with false passages, then I much prefer to use what I have called the *filamentous wedge*. (See illustration.)

Fig 1.

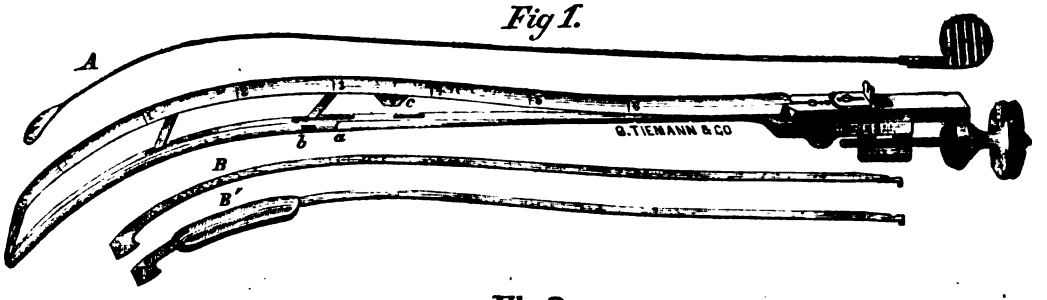
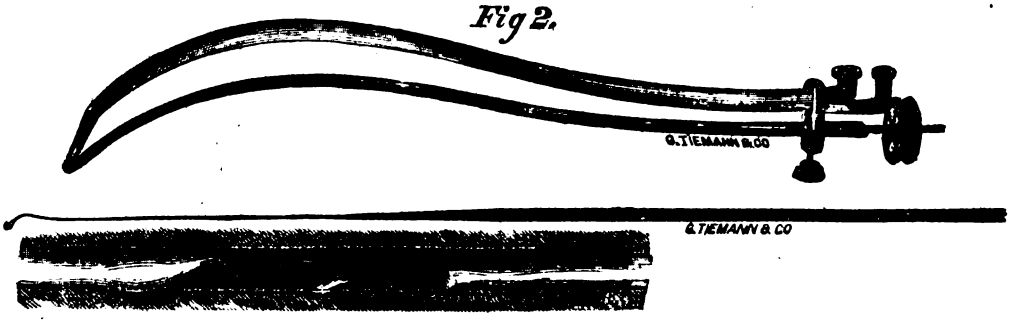


Fig 2.



This instrument is the result of a failure I made two years ago, while attempting to pass one of the smallest tunnelled sounds, over a filamentous bougie, through a close traumatic stricture.

I thereupon had four sizes of the *filamentous wedge*, made by Jno. Reynders & Co., which in the case above referred to, and several times since, have rendered the most satisfactory service.

They are made of whalebone, highly polished, and in sizes of from five to ten of the French scale.

A "No. 5" consists of a point four inches long, which is precisely the filamentous bougie of Gouley, a tapering circular wedge two inches long, which is a continuation of the filamentous point, and a staff eight inches long, which is equal to, and a continuation of, the base of the wedge.

The length of the wedge increases, in the larger sizes, at the expense of the length of the filamentous point, in order to preserve the same gradual taper of the wedge. The filamentous points are also coarser in the *larger* sizes, and it is to be *specially noted* that in *all* the sizes, except at their very *point*, they are of *uniform calibre throughout*. As at first made, the points of all sizes were but about two inches in length.

The long point of this instrument traverses the urethra *beyond* the stricture *before the wedge encounters the contraction*, and therefore the operator can exert *urgent* and *efficient* pressure, with the consciousness that *the wedge has not departed, and cannot depart*, from the urethral canal into a false passage.

So strong a claim can hardly be urged for the *tunnelled* sound, with its *blunt* point, together with its liability, under certain circumstances, to produce a *short* bend in its slender guide.

In continuing the treatment of strictures of all sizes and in all locations, except at the meatus, the *circular wedge*,* in my opinion, continues to be the best instrument so long as but a moderate amount of resistance is encountered in its introduction, and until satisfactory progress ceases to be made in the way of dilatation.

Up to this time the patient will have been put to but little pain and inconvenience, a considerable amount of the contraction will have been overcome, the urethritis and irritability will have been removed or relieved, and the patient will now be in the best condition for further efficient treatment.

At this point, in my opinion, the circular wedge

* A term used to specify a bougie with a *gradual* tapering point. I prefer those made with a Van Buren curve, and with three inches of a taper, each point being only one and a half millimetres less in circumference than its shaft. Such a set will therefore include the regular sizes of the French scale, commencing with No. 11.

ceases to be the best means of securing further progress, for the resisting surface of the stricture is increased by each successive size of wedge, and this not only, but there is also a corresponding increase of difficulty in fixing the stricture, which difficulty increases in proportion to the length of the elastic canal included between the stricture and the glands or part held by the operator.

Moreover, since—as shown by Otis, Weir, and Gross—the size of the meatus, is to the size of the spongy portion of the canal as three to four nearly, it is apparent that the circular wedge can never fully dilate strictures in the deeper portions of the urethra, without destroying the normal conditions of the canal.

In view of the above considerations, I have been led to devise, and, with the assistance of Geo. Tiemann & Co., have produced, the dilator, divulsor, and urethrotome, shown, half size, in Fig. 1. That nothing has been sacrificed to effect this combination, I conclude from the fact that it has served me repeatedly during the last nine months, and I have found it to execute either dilatation, divulsion, or incision, in any portion of the canal, all the way from 20 to 44 of the French scale, as perfectly as though devised for either purpose only.

The curved bars are so made that they dilate but 3½ inches at a time of the urethra, and therefore the operator can address his efforts to the deeper portions of the canal, and enlarge it to the required extent without enlarging the meatus. This is accomplished by means of a joint in the concave bar at *a*. This same joint also allows the bars to dilate to their fullest extent without increasing resistance. The operator is therefore at all stages of progress confronted by the stricture only, and can appreciate exactly the amount of force that is being exerted to effect its removal.

The amount of curve* in this instrument is not less than the curve of Thompson, though distributed through longer space. This distribution of curve enables the operator to make tense, *longitudinally*, any portion of the canal he may desire to incise. Again, the curve allows dilatation or incision to be made in the curved portion of the urethra, without materially disturbing the normal relations of the parts; an advantage not offered by the straight dilating urethrotomes, which in this region make incisions of varying depth.

The blade *A*, of this instrument traverses the convexity of the curve from behind forward. It is sharpened on either end, but blunt on its most projecting edge; and therefore, while it will readily cut the resisting bands, it will crowd away without incising the looser tissues.

By this means the operator is not only enabled to limit the amount of hemorrhage, but also the amount of subsequent urinary infiltration.

A scale of inches, commencing at a point where the knife rises out of the fenestrum which conceals it, extends to the handle, and enables the operator to locate the blade just behind the stricture.

A similar scale to locate the divulsor is on the other side, and commences at the end of the convex bar.

The amount of dilatation is accurately indicated by sliding scales on the handle; one side representing the French, the other the American.

I have found it as easy to pass this instrument along the entire urethral canal, as a bougie of Van Buren of like dimensions.

* To secure the parallel separation of two curves, when one is *within* the other, I found to be a *most difficult* task, nor did I succeed until after many failures, and only when about to accept the failures I finally thought of combining with the joint at *a*, the inclined plane at *c*, and the sliding joint at *b*, by which means the object is accomplished.

It is equipped for the dilatation or divulsion of strictures in all locations, from No. 20 French up to the normal size of the urethra in its *spongy* portion, by simply placing the steel bar *B* in the groove prepared for the knife, which it accurately fills, and into which it is securely retained by a hook on one end, and a hook and sliding catch on the other.

The groove is sufficiently wide to admit of its being readily cleaned with the edge of a piece of blotting-paper, after which the instrument may be dipped in alcohol and set on fire, or be passed through the flame of a spirit-lamp, to prevent the possibility of contagion.

Having carried the dilatation up to the normal size of the spongy portion, the steel bar *B*, on which there is riveted a German silver glove 1½ inches long, may be substituted for the steel bar *B*.

By this means the dilatation can not only be confined to shorter limits, but the stricture can be overdistended without interfering with the normal calibre of the canal elsewhere. Other gloves—thicker, longer, or shorter—can be added to the dilator at trifling cost. A very short one is also provided, though not illustrated, which serves to locate and define, in a very satisfactory manner, strictures of medium and large calibre.

A glove three inches long, to fit over the *concave* bar, is also provided, to still further *distribute pressure* in the divulsion of strictures of *large* calibre.

The dilatation of strictures with a dilator, provided its bars have sufficient surface to reasonably distribute its pressure, is less painful, and is much more promptly accomplished, than by the use of the circular wedge.

With the former instrument the *entire force* is applied directly to, and at right angles with, the constriction, consequently *absolutely without friction*. With the latter, *none of the force is applied at right angles with the contraction, but at right angles with the bevelled plane of the wedge.* Hence the resistance to its introduction, with the consequent *longitudinal stretching* of the urethra.

The resistance encountered in its introduction is always, *cæteris paribus*, directly in proportion to the extent of the surface of the wedge.

The smaller wedges, encountering less resistance, usually accomplish the dilatation satisfactorily up to a point where a dilator of sufficient surface to reasonably distribute its pressure (and thereby prevent injury to the canal) can be employed. After laying aside the wedge, I have frequently seen even timid patients, at a single visit, themselves screw the dilator up to two, and even three French sizes, above the size of wedge employed, without, as they stated, a material increase of pain.

Finally, the liability of *spindle-shaped* dilators, even in dexterous hands, to engage between their blades folds of the urethra when effecting their removal, is by means of the parallel dilatation of this instrument precluded.

Of internal urethrotomy, it may be said that it is a very efficient, prompt, easy, and safe method of cure in the pendulous portion of the urethra.

It must be admitted, however, that it is not so safe in the bulbo-membranous portion; nevertheless, if performed with judicious care, with the proper instruments, and in well-selected cases, it will even here be a comparatively safe operation.

With a view to remove, or at least lessen its chief dangers—hemorrhage, urinary infiltration, and urethral fever—I devised, several months ago, the instrument depicted half size in Fig. 2, which has been called the

urethral tourniquet. It is also made by Tiemann & Co., and consists of two curved bars, each 9¼ inches long, which are connected on their distal end by a third bar half an inch in length. This third bar serves to separate the distal ends of the long bars when moved by a screw at their proximal end. Their proximal ends are separated by a screw on their side, as seen in the figure. When closed the instrument measures twenty of the French scale.

It is easily inserted, and can therefore be made to exert pressure in any portion of the urethra. Moreover, the pressure can be limited to the *exact* extent of the incision by reducing with the fingers the curve in the concave bar. The concave bar is broad and slightly rounded on its projecting surface, that it may distribute its pressure, and thereby contribute to the comfort of the patient.

It has a transverse concavity on its inner surface, to allow it to lie in close contact with its fellow when closed.

The other, or convex bar, is larger than its fellow and nearly round, with the exception of 3½ inches of its distal end, on the convex surface of which there is a rounded, bevelled, blunt edge. This rounded, bevel-edged surface, when buried in the incision with even slight tension, prevents not only the loss of blood, but also hemorrhagic infiltration about the edges of the wound, a condition that may prevail when, to restrain active hemorrhage, the operator relies upon the introduction of a sound plugging the urethra before and behind, without making direct pressure in the cut.

A fenestrum is provided in the short bar, through which the patient may void his urine while the instrument is in situ, though it is generally better to relieve him by the introduction of a large soft catheter.

The larger or convex bar is made of German silver, and is hollow throughout. A septum divides its bore into two compartments throughout its whole length. Through one of these compartments ice-water from a fountain syringe can be made to flow through the whole length of the instrument, while the other compartment will return the fluid; and, by attaching a rubber tube, it may be conducted into a receptacle,—or by opening a fenestrum in the distal end, and corking the return canula, the fluid will flow out through the urethra, between the dilating bar and the canulæ, and thus make the *same* instrument available, when the incision has been made in the upper portion of the canal, or, if desired, another can be obtained with the *position* of the bars reversed.

I have used this instrument once in the bulbo-membranous portion, and several times in the pendulous portion.

In each instance the hemorrhage was arrested at once, and by moderate pressure alone. The tension, it will be observed, can be increased or diminished without disturbing the contact of the bevel-edged bar in the wound.

If hemorrhage should occur, it will be revealed at the outlet of the penis, instead of being concealed in the bladder, as when reliance is placed on the bougie to arrest hemorrhage. Although I have not yet found it necessary to resort to the use of water as an aid in checking hemorrhage, it is, however, consoling to know that an efficient means of using it is in store against a possible necessity; and, again, the facility with which water or any fluid can be conducted to any portion of the urethral canal, and be returned between the bars in actual contact with the urethral wall, would seem to render it a valuable aid in the treatment of urethral fever.

Finally, by reducing the curve in the concave bar, the pressure can be made to conform *exactly* with the length and depth of the incision.

If, now, the instrument be left with the patient, with instructions how far to insert it, and how often, he will be able himself to not only *thoroughly* keep apart the edges of the wound while healing, but will also himself be able to arrest a possible secondary hemorrhage.

32 E. Twenty-ninth Street.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 27 to November 2, 1878.

Janeway, J. H., Major and Surgeon. Relieved from duty in Dept. of the South, and to report to Comd'g General Dept. of the East, for assignment. S. O. 235, A. G. O., Oct. 30, 1878.

Bartholf, J. H., Capt. and Asst. Surgeon. Relieved from duty in Dept. of the Columbia, and to report in person to Comd'g General Dept. of California, for assignment. S. O. 235, C. S., A. G. O.

Loring, L. Y., Capt. and Asst. Surgeon. Relieved from duty at Jefferson Barracks, Mo., and to report in person to Comd'g General Dept. of the Missouri, for assignment, to take effect Nov. 25, 1878. S. O. 235, C. S., A. G. O.

Fitzgerald, J. A., Captain and Asst. Surgeon. Granted leave of absence for six months. S. O. 236, A. G. O., Oct. 31, 1878.

Havard, V., 1st Lieut. and Asst. Surgeon. Assigned to duty at Chattanooga, Tenn. S. O. 66, Dept. of the South, Oct. 22, 1878.

De Loffre, A. A., 1st Lieut. and Asst. Surgeon. Relieved from duty in Dept. of the Missouri, to proceed to New York City, and on arrival report by letter to the Surgeon-General. S. O. 235, C. S., A. G. O.

Wilcox, T. E., 1st Lieut and Asst. Surgeon. Relieved from duty in Dept. of the Missouri, to proceed to New York City, and on arrival report by letter to the Surgeon-General. S. O. 235, C. S., A. G. O.

Newlands, Wm. L., 1st Lieut. and Asst. Surgeon. His resignation accepted by the President, to take effect Oct. 25, 1878. S. O. 234, A. G. O., Oct. 28, 1878.

Medical Items and News.

Contagious Diseases — Weekly Statement.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 2, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Oct. 26, 1878.	0	19	48	2	1	33	0	0
Nov. 2, 1878.	0	14	68	2	3	34	0	0

Office Surgeon-General U. S. Marine Hospital Service. Washington, D. C., Nov. 2, 1878.

National Quarantine Report.—Abstract of sanitary reports received during the past week under the National Quarantine Act:

New Orleans, La.—There were 83 new cases of yellow fever and 109 deaths for the week ending yester-

day. During the week the Board of Health received information of 388 old cases not previously reported. For the past twenty-four hours there were 4 new cases and 8 deaths. Total cases, 13,252; total deaths, 3,973.

Morgan City, La.—During the past week there were 8 deaths from yellow fever. Total cases to date, 563; deaths, 102.

Baton Rouge, La.—For the week ending yesterday evening there were 75 cases of yellow fever and 16 deaths. Total cases, 2,415; deaths, 160.

Mobile, Ala.—During the week ending yesterday evening there were 60 new cases of yellow fever and 10 deaths. Total cases, 224; deaths, 59.

Decatur, Ala.—There were 10 cases of yellow fever and 2 deaths for the week ending Nov. 1st. Total cases, 188; deaths, 42.

Bay St. Louis, Miss.—Total cases of yellow fever to yesterday evening, 535; deaths, 78. Only an occasional case occurring now, and the local health authority considers the epidemic at an end.

Port Gibson, Miss.—There were about 10 deaths in the country near Port Gibson during the past week; none in Port Gibson, where the epidemic is considered at an end.

Pass Christian, Miss.—During the week ending yesterday evening there were 19 cases of yellow fever and no deaths. Two deaths from yellow fever occurred in the week ending Oct. 25th, which were not reported in that week. Total cases to date, 189; deaths, 20.

Grand Junction, Tenn.—To Oct. 26th there were 174 cases of yellow fever and 74 deaths.

Milan, Tenn.—For the two weeks ending yesterday evening there were 12 cases of yellow fever and 6 deaths. Total cases, 15; deaths, 9.

Memphis, Tenn.—During the week ending Oct. 31st there were 22 deaths from yellow fever. Total deaths, 2,964. The Board of Health announced officially, Oct. 28th, that absentees could return with safety.

Mason, Tenn.—The first case of yellow fever—a refugee—occurred Aug. 29th; the first case among inhabitants, Oct. 4th, since which time to yesterday evening there have been 60 cases and 24 deaths.

Chattanooga.—During the week ending yesterday evening there were 28 new cases of yellow fever and 12 deaths. Total cases, 433; deaths, 127.

Meridian, Miss.—Over 400 cases of yellow fever are reported to have occurred to date. Total deaths, 80.

Gallipolis, Ohio.—During the week ending Oct. 30th one new case of yellow fever occurred, and 2 deaths.

No cases of yellow fever or deaths in *Louisville* and *Key West* during the past week.

Havana, Cuba.—23 deaths from yellow fever and 9 from small-pox for the week ending Oct. 26th.

Rio de Janeiro.—1 death from yellow fever and 11 deaths from "pernicious fever" for the week ending Sept. 28th. In the same week there were 1,495 deaths from all causes, of which 139 were from small-pox. Since May 1, 1878, there have been 1,233 deaths from small-pox.

Europe.—In 149 cities and towns of the German Empire, having an aggregate population of 7,429,793, there were 5,755 births and 3,512 deaths for the week ending Oct. 5th, being an annual mortality rate of 24.6 per 1,000 of the population. The lowest death rate, 11.3, was in Kiel; the highest, 42.2, was in Augsburg. The deaths include 108 from scarlet fever and 147 from diphtheria and croup. None from small-pox.—JNO. M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

DEATH OF DR. JOHN GEO. MORGAN.—In Philadelphia, October 4th, Dr. John Geo. Morgan, of St. Louis, Mo., aged 80 years. Dr. Morgan was a native of Connecticut. His father died when he was an infant, and his mother when he was but twelve years old, and he was left to the care of a guardian. Before he was of age he had charge of an academy near Morristown, N. J., and also began reading medicine. He subsequently went to New York, where he attended two or three courses of medical lectures, and studied between the courses in the office of Dr. Perry, at Ridgefield, Conn. The scene of his first active practice was at Auburn, N. Y., where he was soon brought to wide public notice from his professional attendance upon Bishop Hobart during his last sickness. Through the influence of Mr. Horace Hills, one of the inspectors of the State Prison, at Auburn, he obtained the appointment of Surgeon and Physician to the Prison Hospital, and continued in that office between nine and ten years. It was here that he made for himself an historical name by being the first to successfully tie the jugular vein, upon a convict who had cut his throat. At a very early period of his incumbency he conceived the foundation of a medical college in Auburn, and he began with a private course of lectures in his office to three students. The course was repeated the next winter with ten or twelve students. His success as an instructor became known to the profession throughout the State, and he enlarged his office, and the next winter had thirty students. During his last private course the class numbered fifty-three. In the winter of 1834–5, he was waited upon, at Albany, by the Hon. John C. Spencer with a proposition from the Trustees of Geneva College, N. Y., to establish a medical department of the college, as the charter of that institution granted it university privileges. Dr. Thomas Spencer and Dr. Wm. M. Taylor, were consulted by Dr. Morgan. After a series of obstacles were surmounted, and arrangements duly completed, a medical faculty of six was organized, with Dr. Morgan as Dean, and Professor of Surgery. The school was opened with about twenty-five students, and there were about six graduates. It continued to increase annually during Dr. Morgan's connection with it, until there were about 200 students. His health became somewhat impaired, and he resigned his position and removed to New York, where he was for some years engaged in practice. Thence he removed to St. Louis, New Orleans, and San Francisco, and again to New York.

DISTINGUISHED VISITORS.—Dr. John C. Peters gave a reception at his residence, on Tuesday evening, to Drs. Grange Simmons and N. R. Spenser, of Charleston, S. C., who are on a short visit to this city, after a volunteer service of two months in Memphis with the yellow fever sufferers.

DR. BRIDDON'S CASE OF EXTIRPATION OF THE RECTUM.—The report of Dr. Briddon's case of extirpation of the rectum (*Path. Soc.*, page 356) contains two typographical errors. "The upper limit of the cancerous growth was incorporated with the" *peritoneum*, instead of perineum as printed. The error is so obvious from the context, that any reader will see at a glance what was meant. In Dr. B.'s operation upon the female urethra (page 357) the orifice of the canal was *transfixed* instead of being encircled.

DR. ELIZABETH M. CUSHIER presented the specimen removed from the case of sudden death during labor, and reported under the head of Pathological Society Proceedings in our previous issue.

Original Lectures.

PROPHYLAXIS OF HEMIPLEGIA.

CLINICAL LECTURE DELIVERED IN BELLEVUE HOSPITAL.

By W. H. THOMSON, M.D.,

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GENTLEMEN:—In no class of diseases is the study of their etiology so important as in nervous affections, because the majority of them are not primarily nervous in their origin, but rather are simply nervous sequelæ of diseases occurring in wholly different structures. Their effects on the nervous system, however, are such that its symptoms completely overshadow everything else and thus lead naturally to their too exclusive consideration, especially as regards treatment. A man, for instance, who survived for a while the lodgement of a bullet in his brain, would scarcely be rated as an example of nervous disease, and yet in what respect does his case essentially differ from one of hemiplegia due to the sudden lodgement in a cerebral artery of a vegetation detached from a cardiac valve, except that in the latter the foreign body came from within rather than from without? So, also, an apoplectic clot is almost always the result, not of any nervous disorder, but of vascular disease. Apoplectic hemiplegia, therefore, requires for its proper understanding, by the practical physician at least, not so much a minute acquaintance with the localization of nerve-centres and their functions, as a knowledge of the effects, for example, of disorders of the kidneys upon the texture of the arteries. Again, in syphilitic hemiplegia, it is not the nerves, but rather the connective tissue, or else the membranes of the brain, which are involved, and from which the entire trouble proceeds, producing nervous symptoms either by exudation or effusion. Hence, in most paralyses, the nervous lesion is secondary to primary disease elsewhere. Etiologically, therefore, we may divide the common forms of hemiplegia into three classes. 1. Embolic; 2. Syphilitic; 3. Vascular.

Embolism, producing hemiplegia, is most commonly due to one of those little wart-like formations caused by endocarditis upon a heart valve, which, after breaking its pedicle, is washed up to the circle of Willis. If the plug passes beyond the circle of Willis it is then oftenest arrested in the left middle cerebral artery, with results more disastrous than if it occluded a much larger vessel below the great arterial ring. The reason of this is, that the arteries of the brain do not anastomose above the circle of Willis, so that if one of them becomes closed, those parts of the brain supplied by it can get no help from their neighbors and are hence likely soon to soften.

There are necessarily no premonitory symptoms in this form of hemiplegia. It comes without giving any warning to the patient or affording to the physician any signs, other than that if he knows his patient has roughened valves, he may suspect a liability to it, but no more. Nothing, therefore, can be done to prevent its occurrence. We may be tolerably assured of embolism in any given case, if there be a heart murmur, if there be a healthy radial artery, if the attack was extremely sudden, if the patient be comparatively young, and if the consciousness is intact, which is often evidently the case, though there be total aphasia. But on the other hand, the absence of these elements does not disprove it.

In striking contrast to the embolic form, syphilitic hemiplegia is almost always preceded by significant symptoms, valuable both for diagnosis and treatment. Of these the most important and constant is headache, both preceding and following the attack. It is rarely absent from one of these periods and most commonly belongs to both, though in some cases more severe before the attack, in others, afterwards. It differs from the slight temporary headaches which may presage vascular hemiplegia, in being far more constant and severe, sometimes agonizingly so, continuous, and generally worse at night. Another common symptom preceding this form of hemiplegia is that of slight, usually transient, local paralyses occurring in different portions of the body. The uvula may be found out of line, or the tongue protruded to one side with a thickened articulation, or else there may be a little ptosis of one eyelid, or slight strabismus, or numbness or weakness in parts of one limb, etc. Another peculiarity of syphilitic hemiplegia is that it may develop slowly, beginning, for instance, in the morning and not becoming complete till evening; and lastly, it quite often occurs without loss of consciousness. Sometimes, however, it begins with, or is preceded by, an epileptic fit or fits. Here again headache is a valuable aid in diagnosis, for syphilitic epilepsy differs from the common form of that disease in a permanent sense of discomfort about the head during the intervals between the attacks. Like other syphilitic neuroses, hemiplegia is a late manifestation of that disease, often only after years have elapsed since the primary infection, which, moreover, may have had but slight secondary symptoms following it. But the prognosis in syphilitic hemiplegia is much better, as a rule, than in the other forms, and you may sometimes use this fact successfully to quicken the memory of a patient who has denied before that he ever put himself in the way of contracting syphilis. Iodide of potassium, of course, should be used unsparingly, from drachm doses upwards, with $\frac{1}{16}$ gr. doses of corrosive sublimate, and to sustain the patient against the iodide I would recommend,

℞. Ac. phosphor. dil..... ʒ vi.
Syr. hypophosphit. ad..... ʒ iv.
M.

S.—Two teaspoonfuls in water, t. i. d.

But it is especially the precursors of vascular hemiplegia, which you should learn well and carefully attend to. They are not so pronounced, and are more complex than in the syphilitic form, but nevertheless, the more important of them are rarely absent, and when recognized in time may be of unspeakable importance in leading to measures which will prevent a misfortune worse often than death itself. Vascular hemiplegia, I think, scarcely ever occurs until long after the existence of signs which are as readily appreciable, and even more indicative of danger, than cough, for example, is indicative of the approach of phthisis. As phthisis has both its rational and its physical signs connected with the pulmonary organs, so the vascular disease which causes hemiplegia has its rational and its physical signs; the first consisting of nervous symptoms, the latter of structural changes in the vessels.

Of the rational or nervous symptoms you will have first, vertigo. This is usually slight, not often with reeling, coming on suddenly; not, like other kinds, oftenest on first rising, but more commonly some time during the day, not long after a meal. But I must

tell you that vertigo is an exceedingly intricate symptom, too much so for us to complete the topic now. But before you set down vertigo as threatening apoplexy, examine the ears. Some of the worst cases which I have seen have been caused by plugs of hardened wax, and so may any pressure transmitted to, or arising within, the labyrinth, make walking extremely unsteady from dizziness. Some disorders of the ocular muscles cause vertigo also, while the giddiness caused by fermentation in the alimentary canal, or "biliousness," as the patients term it, is easily distinguished by the presence of other gastric symptoms, such as flatulence, acidity, qualmishness, etc.

Another much more constant symptom is early waking in the morning, with slight headache which passes off after rising. When a patient finds that he awakes earlier than usual, and finds it hard to sleep again, that this from being occasional is becoming habitual, and that his head feels uncomfortable until he gets up, weakening of the cerebral arteries may be suspected.

Cramps in the calves of the legs, occurring generally in the morning, but also at other times, are of even more serious import than the preceding, especially if these are also present. A dread of descending stairs is common also, but is rather a sign of senility than of hemiplegia.

Of mental symptoms, the most characteristic are sudden loss of memory, sudden confusion of ideas, and sudden loss of words. When the memory is at fault, it is not that of old, but of recent impressions, exemplified in telling a story or relating an event twice over, surprising friends by not recalling what happened a few days before, and then having it suddenly recur to him, etc. Confusion of ideas, the patient of course is himself aware of, and on account of its strangeness he is apt to be much alarmed by it. The loss of words is also of a special kind, not at all like the common experience of momentarily being at a loss for the right word, when we send the mind hunting one up, but the patient feels that some very ordinary word has suddenly escaped him, and with it also the idea he had and was about to express, so that he asks, what was I saying? All these mental derangements are palpable to the patient himself, and often lead to a too well-grounded foreboding of impending misfortune, but as they may also occur at any time of life from temporary states of cerebral anæmia or exhaustion, they are not conclusive by themselves, any more than cough is conclusive of phthisis, but still they are to be carefully noted. Mental strain, impoverished blood, or great loss of it, etc., produce just such symptoms, the result to the nerve-centres being the same, only that in the vascular disease, which threatens apoplexy, we have a more permanent cause of anæmia of those centres from narrowing or occlusion of great numbers of the blood-vessels.

You may then begin the examination for the physical signs of the vascular disease by inspection of the circulation of the skin; the back of the hands affording the most convenient locality. The most common as well as significant appearance is a mottled skin, composed of larger spaces of a marked unnatural whiteness, interspersed with smaller ones pigmented brown or olive-colored. Should you rub the hand smartly, you can produce little more than an evanescent blush in the whitened portions, its quick fading indicating the paucity of permeable capillaries. For the same reason, the skin, where it is not exposed, is nevertheless altogether too white and scurfy. This state of affairs readily affords the explanation of the characteristic pulse, which you will soon have to examine.

You cannot now be too particular in the investigation of the state of the arteries any more than you can be too particular when you are testing a lung. Just as you should complete percussion before you begin auscultation, so the first thing to do with the radial is to feel it, without allowing your attention to be drawn off to the pulse-beat. If the radial artery is healthy, you can scarcely feel it at all; I mean distinguish it in its bed from the surrounding structures, and you judge of its presence there almost wholly from the throb of the pulse. But I doubt if such an artery as that existed in the body of a patient with vascular hemiplegia for years before his accident. Instead of that, the coats of his radial gradually lost their pliability, then became more and more thickened, growing harder all the time, until a year or so before the "stroke," that artery could have been felt more like a strong pulsating cord which you could roll over in its bed, perhaps giving to your fingers the impression of a wire under the skin. If now you note for a moment how far along the forearm you can trace the vessel, you may find it distinguishable half way up, and by the pulse-beat, even two-thirds the way to the elbow. What a departure this is from the healthy state, you can learn by the first examination you make of a person with healthy arteries, when the vessel becomes indistinguishable within an inch from the wrist. The next point to note, is whether besides being hard, the artery is uniform in its calibre, or the reverse. In many cases of arterial disease, and especially in old persons, it may be very irregular, even to the extent of resembling a string of beads rather than like a smooth cylinder. This is due to atheromatous or calcareous patches of degeneration in its course, and as just stated, they are particularly frequent in the aged; but I believe that in the majority of cases of dangerous arteries you will find nothing of the sort in the radials; these vessels being simply too large, too hard, and plainly inelastic. You may then observe the same state of things in the temporals, but in addition you will note these vessels to be extremely tortuous, and in bald persons sometimes coursing up the scalp like cork-screws. The extent of this twisting is pretty conclusive of the degree of obstruction which the blood within the artery has to overcome in the diseased arterioles and capillaries beyond. Such radial or temporal arteries of course, are never single in these morbid characters, for like changes are much more complete in the cerebral vessels, owing to the extreme delicacy and comparative weakness of the connective tissue which surrounds and supports them.

You are now ready both to recognize and understand the import of the peculiar pulse of a person who is in danger of a hemorrhage into his brain. You should lay the tips of your four fingers on the radial, and note if by moderate pressure the pulse is arrested or not under the upper or first finger. A little practice will show you that in distinction from a healthy pulse, no matter how strong that be, the pulse of such a patient is not easily brought to a stop, but very probably is appreciable by all the four fingers. In a healthy pulse, on the other hand, though beating quite forcibly, as just after exercise, the elastic artery can be quickly compressed, so that the stroke beats strongly against the first finger, but does not pass under it to the remaining fingers, while with this morbid pulse you have to use twice the amount of pressure to arrest the wave. Now, an incompressible pulse like this, occurring in a thickened artery, is

often mistaken for a strong and full pulse, whereas it may be quite the reverse of either. It is taken for a full pulse by those who are misled by the touch of a hypertrophied artery, whose real calibre is much less than natural, and an erroneous impression of strength is easily given also by the continued beat or seeming resistance under pressure. In the case of a patient fatally sick with Bright's disease, I once knew a distinguished physician pronounce a favorable opinion as to immediate risk, on account of his "fine, full, healthy pulse." As the strength of any pulse is wholly derived from the heart, this gentleman would have discovered, if he had listened there, that the heart was beating so feebly that no impulse, and scarcely a first sound, could be made out. If there be some febrile excitement in a patient with an incompressible pulse, you may be quite puzzled sometimes to distinguish it from a strong pulse. But a purely febrile pulse ought to be a compressible pulse, no matter how strong it be, and the heart ought to give you a clearer impression of strength than the pulse; nor will fever ever harden an artery, so that you can feel it in its bed.

Another character of this diseased pulse, besides incompressibility, is that it is *long;* that is, it does not pass quickly and abruptly under the finger, but with an evidently prolonged vibration. A long pulse is the opposite, not of a rapid or frequent pulse, but of a *short* pulse. You may have a very rapid and yet *long* pulse, as in some dangerous convulsive states, like puerperal eclampsia, and, on the other hand, some very slow yet short pulses, as in some cases of anæmia. Whenever the arterial system is quite clear, and the blood can course freely through it, whether your patient be healthy, weak, or in a high fever, the pulse will be *short*, quickly passing under the finger; whenever, on the other hand, the outflow from artery to capillary and vein is obstructed in the artery, whether by nervous spasm or arterial disease, the pulse wave is retarded, and therefore prolonged.

Now, what is the explanation both of the incompressibility and the length of the pulse here? They mean simply that the arteries are constantly *over-full.* They are always in a state of tubes fully opened at one end and partially closed at the other, so that from narrowing or total obliteration of multitudes of the terminal vessels or arterioles by disease, the larger vessels are in a condition of chronic distention. With this reason for the incompressible pulse we have also the explanation of the long pulse, for, as we have just remarked, were the arterioles and capillaries all free, the pulse impulse would pass quickly through, whether the heart was beating slowly or rapidly, strongly or feebly, but the fuller the arteries, the longer does it take the wave to overcome the resistance of the dammed-up current.

We are now prepared to answer the main practical question—What is it that has wrought this physical change in the arteries from the healthy state? and the reply, in nineteen cases out of twenty, is *toxæmia*, or chronic poisoning of the blood from deficient action of the excreting glands. In some cases the liver is largely responsible, owing to failure on its part to form urea, uric acid being generated in abnormal amount instead. An incompressible pulse is therefore very characteristic of gout, a disease of middle and past-middle life, and also occurs in children during and after scarlet fever, when, quite apart from nephritis, uric acid is often present in excessive quantity. But the most irritating blood by far, to the inner coats of arteries, is the poisoned blood of Bright's disease, and to such an extent is this true, that some authors ascribe three-fourths of the cases of hemorrhagic apoplexy to granular kidneys. It is, however, by no means only those who have albumen and casts in their urine who have dangerous arteries, for often the blood becomes similarly contaminated, and the vessels diseased, in persons who, without habitually passing albumen, nevertheless habitually pass urine of *a low specific gravity*. Except in those cases of nervous disorders which are characterized by an abundant flow of limpid urine of a low specific gravity, such as cases of spinal exhaustion from excessive venery, a habitual condition of this kind in the urine is indicative of damaged or imperfectly working kidneys, if not of cirrhosed liver as well; and such persons will be found to bear surgical operations very badly, to succumb quickly to fevers, and constantly to show, on examination, that their arteries are the very reverse of healthy. In fully-developed Bright's disease, of course, the arteries quickly turn hard and brittle at any period of life. I have noticed such blood-vessels in children who had this affection, and I believe that all recorded instances of hemorrhagic apoplexy in children have had this element noted in their history.

With this statement of the condition which causes a liability to vessel rupture, we will conclude by enumerating the immediate exciting causes that may determine the occurrence of the accident itself.

First, such arteries are likely to be subject to the caprices of a more powerful heart than ever happens to healthy arteries. The heart has to increase in size and strength in order to balance the growing difficulty in the arterial flow; but unfortunately the poisoned blood of Bright's disease often deranges the great nervous mechanism which regulates the distribution of blood so that we may have, on the one hand, violent action of the hypertrophied heart occur; or, on the other hand, spasm of the walls of the arterioles with greatly increased arterial tension in consequence; or both together. Influences which would excite the vaso-motor nerve-centres only moderately in health, may act very immoderately in Bright's disease, and put the weakened walls to an excessive strain. Thus the first shock of a mental emotion, like anger or fear, causes paleness from sudden contraction of the arterioles, when the heart may begin to beat violently before the arterioles begin to relax. A fit of passion, therefore, often induces an apoplectic attack. Extreme cold weather also generally increases the list of sudden deaths from apoplexy in the obituary columns of the newspaper; for the lessened circulation of the skin not only increases that of the internal viscera, but the skin also ceases then its usual assistance to the function of the kidneys. Toxic disturbance of vaso-motor centres is moreover common during the latter hours of the night, as we find illustrated by the usual occurrence then of attacks of asthma, epilepsy, gout, nightmare, and uræmic dyspnœa, and hence also the many instances of persons found dead in their beds from apoplexy, especially in cold weather. Another common cause is the addition of a large element of nitrogenous food by a hearty meat meal, for it is well known that, in health, the kidneys immediately answer such an addition by a corresponding increase in the elimination of urea; but if they are embarrassed by disease, they may suddenly, and critically, fail to do so. On this account apoplectic attacks are especially frequent shortly after a meal. Congestion of the cerebral veins and sinuses by stopping expiration, as in lifting, coughing, vomiting, stooping, or in defecation, of course strain the cerebral arteries by retrograde action on the outflow; and lastly, we must be assured that the arterial system is not much diseased whenever we

recommend a person to take Russian or Turkish baths. When the body is immersed in watery vapor, the skin can add from one to six pounds of water to the volume of the circulation in a few minutes, and on that account most people experience an unpleasant sensation of fulness of the head on first entering these baths, and which does not pass off until a free perspiration relieves the over-distention of the blood-vessels.

Besides the negative advice of avoiding or providing against the exciting causes of vessel rupture just enumerated, what measures should you recommend one to take in whom you find the signs of arterial disease?

First in importance, we may say, comes the subject of diet, for when the elimination of urea by the kidneys is imperfect, the nitrogenous element of food ought to be reduced to as low a point as is compatible with ordinary life. That nitrogenous food is consumed greatly in excess of the actual needs of the economy in the dietary of this country, is amply proved, not only by the contrast in the use of animal food between us and the Asiatics for instance, but also by the prevalence among us of kidney disease. An animal diet, *cæteris paribus*, always increases arterial tension, and a vegetable diet diminishes it, and so soon as embarrassment of the kidneys occurs, this difference of effect between these foods becomes immediately exaggerated, somewhat like the exaggerated susceptibility to saccharine excess in diabetes. If the patient objects to entire restriction from meat, he may then be recommended to take it at one of the two earlier meals of the day, and not at night. The healthiest article of nitrogenous diet is milk, but used only as it is taken by the nomad peoples who have to live largely upon the milk of their flocks and herds. It is singular that the significance of the practice, universal, as far as I know, among such races, of artificially souring milk before using it, is not often alluded to in our books on dietetics. Among the Arabs, and in fact among all the different races of the Turkish Empire, sweet milk is hardly ever even tasted, while soured milk is used constantly, in many cases with every meal, constituting, next to bread, the chief food of the peasantry, and still more so of the wandering Bedouin or Tartar. As soon as the milk is brought into the tent from the cows, goats, sheep, asses, or mares, while yet warm, it has a certain proportion of sour milk added to it from the previous day's stock, and the milk is then warmed slightly to hasten the fermentation. The *original ferment is derived from yeast*, and hence this artificial souring of the milk is wholly different from milk when it is left to sour spontaneously, for that, on the contrary, is the first step in its putrefaction. Now the superior digestibility of soured milk is due to the fact that the stomach is spared the task of curdling the milk itself, preparatory to its further digestion. The curdling of milk in the stomach must necessarily consume a considerable quantity of gastric juice, and many persons even in health, and *à fortiori*, most invalids, find their digestive secretions scarcely able to accomplish more than this initial curdling, so that the latter stages of milk digestion are so imperfect that they find this article constipating, or "bilious." This soured milk, however, I have never found indigestible, but on the contrary, of especial benefit to phthisical patients, as well as in Bright's, and many other constitutional diseases. It can be readily made in this country by taking half a pint of fresh milk, all the better if still warm from the cow, and then warming it to a blood heat. Add to this two tablespoons of yeast. In six or eight hours it is curdled enough to take two ounces of it for curdling another half pint, and this is to be repeated till the fifth or sixth specimen has been soured, when the bitter taste of the yeast originally added, is no longer distinguishable. After this, milk may be soured every day from the milk of the previous day. This milk has a peculiarly pleasant acid flavor which I have found universally acceptable, even to those who were strongly prejudiced against milk in any form. It is best served well stirred, and eaten with bread, and may be sweetened with sugar, if so desired. Another agreeable form of using it is to hang up the soured milk in a linen bag till the whey is drained off, and then the residue used when about the consistence of whipped cream, sweetened with sugar and spread, like butter, thickly on bread.

Fresh fish is better than meat, and eggs taken in moderation; but all vegetables (except asparagus), and all fruits, may be used freely. Of the beverages, tea and coffee can scarcely be regarded as injurious to any persons when used only once a day each, but a slight excess of tea is harmful in any case where the heart is much damaged, from its aggravating the flatulence and acidity of the congested stomach, and from its special tendency to derange the rhythm of the pulse. All alcoholic drinks, without exception, should be forbidden, and especially malt liquors.

In health, a walk in the open air immediately lowers the tension of the arterial pulse, or as the common expression is, softens it. Let a patient with gouty, or even uræmic, blood, be examined before starting on an open air trip in the country, or at the seaside, and then afterwards, and the change from an incompressible, to a soft, naturally compressible pulse, is often surprising. So all muscular exercise lowers arterial tension, whether in health or in disease. This effect is plainly due to the increased oxidation of effete products by active respiration, and hence, next to temperance in eating and drinking, habitual good, free breathing is the best of safeguards against apoplexy or hemiplegia. You should warn such patients, however, against all forms of fatiguing exercise, for as a class they are poorly provided against the effects of overstrain of any kind.

The medicines best calculated to remedy arterial degeneration, and hence to be used as prophylactics of hemiplegia, are iron and the corrosive sublimate. With the steady employment of the latter agent, in small doses, I have repeatedly noticed the specific gravity of the urine increased, and a restoration of the normal coloring-matters and salts take place, while an improvement in the head symptoms, above mentioned, and a lowering of the arterial tension, has accompanied this change in a fashion too unmistakable to be ascribed to other agencies. The dose should not exceed $\frac{1}{10}$th of a grain, three times a day, and is to be continued as long as no symptoms of mercurial disorder appear, when, if so, it may be intermitted for a while. Iron is the great respiratory food of the body, and therefore is to be given whenever we fear muscular degeneration. Muscular power is, in all animated nature, invariably proportioned to the activity of the respiration, and hence the exceptional strength of the muscles of insects. On this account, if you fear degeneration of the cardiac walls, or like change in the muscular fibre of the vascular system generally, this carrier of oxygen is one of the best of restoratives.

DISINFECTANT.—A strong solution of oxalic acid is said to be an excellent disinfectant. Great care must be exercised in its use. It will not be popular.

Original Communications.

EXTIRPATION OF LARGE FIBRO-CELLULAR TUMOR OF NECK,

WITH REMOVAL OF PORTIONS OF PRIMITIVE CAROTID ARTERY, INTERNAL JUGULAR VEIN, DESCENDENS NONI, PNEUMOGASTRIC, RECURRENT LARYNGEAL AND SYMPATHETIC NERVES.

By GEORGE E. POST, M.D.,

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SABAT, æt. seven years, was admitted to the Hospital of the Syrian Protestant College in 1870, for a fibro-cellular tumor situated in the right occipito-parietal region. This tumor was removed by the knife, leaving a denuded space six inches in diameter to granulate. The child made a good recovery, and returned to her home with no glandular enlargements in the neck.

On the 4th of September, 1872, Sabat returned to the hospital with a tumor of the size of a cocoanut on the right side of the neck. The cicatrix of the former wound had so far contracted at the expense of the scalp that it was quite concealed by the hair, and no deformity revealed the frightful loss of substance which had taken place. The new tumor was well encysted, and although dipping deep among the muscles of the neck, appeared to be free from attachment to the spinal column or the trachea. It was evidently surrounded by an independent sheath not adherent to the sterno-cleido-mastoid. Under these circumstances, and in view of the general good health of the child, it was decided to extirpate the tumor. The patient being placed under chloroform, an incision was made from the mastoid process to the sternum, along the anterior border of the muscle, and two horizontal incisions, each two inches in length, were made from the extremities of the first incision, outward and backward, separating the sterno-cleido-mastoid from its two attachments. When the surface of the sac was reached, it was found that the primitive carotid artery was firmly attached to its anterior and internal aspect. As the origins of the terminal branches were also involved in the tumor, the primitive carotid was tied in the lower portion of the neck, and its two branches above the bifurcation. The arteries were then severed and removed with the mass of the tumor, which also included the internal jugular vein, and the descendens noni, pneumogastric, recurrent laryngeal, and sympathetic nerves. These were all divided above and below the tumor. The ghastly wound exposed the deep layer of the muscles of the neck, the trachea and œsophagus, the transverse processes of the cervical vertebræ, and the base of the skull. The operation lasted an hour and a half, and required to be suspended several times to allow the administration of stimulants. Nevertheless, the patient rallied well after the operation, the only important symptom being temporary paralysis of the bladder, requiring the use of the catheter for a few days. The wound healed kindly, and the patient was discharged at the end of three weeks.

Unhappily the tumor returned in the superior portion of the cicatrix, and as it was then firmly attached to the base of the skull, no attempt could be made to extirpate it. A microscopic examination showed the tumor to be an encephaloma. The child died four months after the operation.

TRACHEOTOMY IN SYPHILITIC DISEASE OF THE LARYNX.

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TRACHEOTOMY as a means of saving life, where death seems imminent from asphyxia—as in croup or œdema glottidis—is now so firmly established in the favor of the medical profession as to need no advocate. That there are other indications for its performance, however, and a wider field for its usefulness, cannot be doubted.

The following case seems instructive, as showing how happy may be its results, not only in averting death, but also as a potent means towards recovery:

On the 23d of November, 1877, I was called to see Mr. S. I. W., living in the country some distance from New York, and supposed to be suffering from typho-malarial fever. I gained the following history, and noted the following symptoms:

The patient was unmarried, and about forty years of age. He had been actively engaged in business until a year before, at which time he began to suffer from rheumatic pains in the joints and back, with headache and a gradual loss of strength. He had been under medical advice since the previous September, and had been confined to his bed since October, suffering from fever, very intense headache—always worse at night—and diarrhœa, with great pain in the abdomen.

The knees were found to be swollen, and painful upon pressure, and there had been for some time a severe cough and a profuse expectoration of a foul-smelling sanguino-purulent matter.

The patient was much emaciated, the voice hoarse, and the skin bathed constantly in a cold perspiration, and acutely sensitive to the slightest draught of air. The pulse was 100, and the temperature 101° to 102°, and there was considerable tenderness in the right iliac fossa. A careful examination of the chest failed to reveal any abnormality. Upon the head, in the parietal and frontal regions, several large nodes were found, which were very sensitive. Upon examining the throat, the pharynx was found to be the seat of extensive ulceration, and the mucous membrane of the pharynx and larynx, as far as seen, was much thickened. I did not have with me the means of making a more critical examination of the larynx; but the cough, the great hoarseness, the sanguino-purulent expectoration, and the tenderness over the larynx pointed to it as the seat of very active and extensive ulceration. The patient, upon being interrogated, gave the following history of syphilitic infection: The primary sore was contracted in 1865, and healed readily under treatment. During the next twelve months secondary symptoms showed themselves, which also yielded to treatment. After this the patient suffered occasionally from throat symptoms, but enjoyed fair health, as far as the constitutional disease was concerned, until the winter of 1876–'77, when he suffered from headache and rheumatism, of supposed malarial origin. With now and then an intermission, these symptoms became worse until I saw the patient in November.

The patient was put upon antisyphilitic treatment, consisting mainly of the iodide of potassium, and astringent sprays were directed for the throat. Although only moderate doses of the iodide of potassium could be given, on account of the irritability of the patient's bowels, still he improved rapidly, and in two weeks all the symptoms had much improved,

and the patient was able to sit up. About the first of January, however, the cough became spasmodic in character, the attack coming on at night, and lasting several hours. Chloroform inhalations somewhat mitigated the severity of these attacks, but on the 5th of January the patient had a very violent seizure, and, after becoming alarmingly exhausted and asphyxiated, coughed up a piece of necrosed cartilage apparently from the cricoid. The next day, after another attack, another piece was coughed up, but swallowed. The patient seemed now so much relieved as to feel almost well, but unfortunately this improvement was of short duration, for on the 17th the voice became again very husky, and the cough more troublesome.

From the 20th to the 23d of January the patient had several severe laryngeal spasms, one on the 22d having almost terminated fatally.

When I saw the patient on the 23d of January, he had eaten little or nothing for twenty-four hours. He was breathing with great difficulty, and anxiously fearing the onset of another attack, which he felt must be fatal. It was evident that there was more necrosed cartilage to be thrown off from the larynx, and that this, together with ulceration of the soft tissues, was exciting the spasm.

I had come prepared to do tracheotomy, and, having gained the consent of the patient and his family, proceeded to the operation at 3 P.M., assisted by Drs. B. and B. There was considerable venous hemorrhage, and the introduction of the tube was not easy; but the hemorrhage ceased when the tube was fairly in the trachea, and the patient breathed freely after the tube had given exit to a considerable amount of sanguino-purulent matter. During the next forty-eight hours the patient was much prostrated, and able only to take milk and brandy, which were freely administered. The inner tube needed almost constant cleaning, the expectoration through it being profuse. By the 26th, however, the patient was able to take broth, and the administration of the iodide of potassium was again begun. On the 28th I removed the tube, a medium-sized German-silver one, and replaced it by a smaller hard rubber one. This tube proved much more comfortable, and occasioned little or no irritation up to the time of its removal on May 29th, a space of over four months. By March the patient was well on the road to recovery, and had taken daily most of the time since February from sixty to ninety grains of the iodide of potassium, together with the syrup of the iodide of iron and cod-liver oil. By the middle of March the expectoration had become simply mucous, and the cough slight. By the beginning of April the patient went about the house, and ate at the table. From time to time sprays had been used of zinc, carbolic acid, or sulphate of copper, as the occasion seemed to indicate. On May 27th, four months after the operation, the patient came to the city with a view to the removal of the tube. On May 29th, I took the patient to see Dr. Beverley Robinson, who made a laryngoscopic examination, and found the following condition of affairs:

The right vocal cord quite immovable, the left during phonation approaching to the median line, or a little beyond. During forced inspiration, the left vocal cord freely abducts, while the right remains motionless.

Both vocal cords, the epiglottis and the surrounding parts somewhat congested and thickened, but no ulcerations are anywhere to be seen. During the inspiratory effort, the glottic space is about one-half. Upon removing the tube, we noticed a deformity at the right side of the larynx, over the cricoid, evidently occasioned by loss of tissue.

The patient was found to breathe quite freely without the tube, and with the wound closed; but it was deemed prudent to again insert it after leaving it out for half an hour. On May 31st, I again removed the tube, but as its reinsertion occasioned considerable irritation, I removed it permanently on June 1st. The opening in the trachea closed rapidly, and by June 8th admitted a fine probe with difficulty. No bad symptoms showed themselves, and the patient returned to the country on June 15th, feeling quite strong and well, having gained more than fifty pounds since the operation.

The following points of especial interest may be noted:

The patient was able to speak as well with the inner tube in place as when it was removed, and without closing the external aperture; the former fact apparently to be accounted for by the small size of the tube, which did not too much interfere with the passage of air through the larynx when the latter became patulous, but still was large enough to give that organ rest in respiration, the latter seeming to indicate that the window in the outer tube was useless to him; in fact, it seemed a detriment, since, when the inner tube was left out for an hour or two, granulations seemed to force their way down, and to render its reintroduction difficult. It seems, therefore, that while a large tube is indicated at first, when there is much broken-down tissue to be discharged, a smaller one is later to be preferred, as tending to permit an occasional use of the larynx during the process of cicatrization, and thus to avoid adhesions and stenosis.

In looking up the literature of this subject I have found ample justification for the operation, not only as a means of averting imminent death, but also with a view to the aid which it brings in the cure of the condition which renders it necessary. The uniform good results which have attended it even in the most extreme necessity, as well as the warning unmistakably given by the recorded cases of death while the operation was under consideration but before it was performed, point at once to its necessity and the danger of delay. We do not have here, as in diphtheria or phthisis, a disease for which there is too often no satisfactory after-treatment, but one for which, however terrible its manifestations, we possess a reliable remedy. By prolonging the patient's life we gain time for efficient treatment; nor is this all, for by diverting the air from the larynx we give that organ the rest which is almost necessary—often quite so—to the process of repair and cicatrization.

McDowell, in *The Medical Press and Circular* for March 28, 1877, has an excellent article entitled "Tracheotomy and its Advisability in Certain Forms of Syphilitic Disease," in which he adduces cases and arguments in favor of the operation. He says:

"There are two forms of syphilitic disease of the larynx in which tracheotomy may be called for: the phagedenic and the serpiginous.

"The former is much the more common, and will present itself generally in naturally weak and broken-down subjects. It is rapid and destructive in its progress, often eroding the cartilages of the larynx. It requires active local as well as general treatment.

"The serpiginous form, on the contrary, most commonly occurs—when it does present itself, which is very rarely—in strong, healthy individuals. It is much slower in its progress, and carries before it an effusion of specific lymph. It is in the former that large doses of the iodide of potassium and iron, com-

bined with opium, and liberal diet, will prove most serviceable. In the latter a judicious administration of a carefully sustained course of mercury will give the best results."

McDowell also quotes Bregant as saying: "When ulceration has come and seems to be unaffected by general treatment, the subject of tracheotomy claims serious consideration; for, unless the organ of voice and respiration can be kept quiet, repair will not go on, and as long as progressive ulcerative disease exists, a sudden spasm of the larynx is imminent, and also the death of the patient. The operation should, however, only be undertaken when the disease is steadily progressing in spite of treatment, and it is clear that the larynx will be destroyed as a vocal as well as a respiratory organ, unless some step be taken to stop its progress; and of these steps there is none other equal to tracheotomy, for all surgeons are familiar with the fact that, even under the most extreme conditions of disease, repair goes on in the larynx directly the tube has been introduced, and physiological rest is given to the organ."

Mr. Hilton says, quoted by the same writer: "In chronic laryngitis, cured by tracheotomy, the cure is not effected by opening the larynx, but by giving the larynx rest—the operation being performed, primarily, to secure continuance of life by allowing the patient to breathe through the tube; secondly, to give rest to the diseased part. The air is diverted away from the larynx, giving the larynx an opportunity to recover itself."

The cases mentioned by McDowell are briefly as follows:

Case I.—A married woman, who had contracted syphilis many years before, was admitted to the Mercers' Hospital suffering from continual dyspnœa, with almost complete aphonia, and attacks of laryngeal spasm imperilling life. For a time the disease was abated, but a few months (Feb., 1876) after the patient was readmitted to the hospital in such a condition as to lead to a consultation with reference to tracheotomy.

Five o'clock P.M. was agreed upon as the time for the operation. At the appointed time the patient was in extremis; but the operation was successfully performed, and the patient discharged cured on the 28th day, the tube having been removed on the 9th day after the operation.

This patient afterwards bore a healthy child.

2d. Two cases of death from laryngeal spasm, from extensive syphilitic ulceration of the larynx, are also noted by McDowell.

The first patient suffered from tertiary disease, was prescribed for one day, and died the next, before the operation could be done.

The second patient suffered also from tertiary ulcerations of the larynx. There was great difficulty in breathing, and occasional laryngeal spasm: the latter relieved by chloroform inhalations. The patient was admitted to hospital, and tracheotomy was discussed, but deferred until the next day; but during the night the patient died from laryngeal spasm.

Two cases of syphilitic caries of the laryngeal cartilages are very instructively compared by Cartier and Mason in *The Lyons Médical*, No. 39, for 1876. The first case occurred in the service of M. le Dr. Bergeret, and is briefly as follows: M. ——, æt. 45, suffering from tertiary laryngeal ulceration, tracheotomy was done the first time on July 20, 1870, for asphyxia. On Aug. 15th the second operation was done, and on Aug. 30th the third, under similar circumstances.

Eight days after the third operation a piece of necrosed cartilage was expelled through the tube, and on Oct. 1st a larger piece was expelled through the mouth. After this, under proper treatment, the patient recovered good health; but the ulceration and consequent cicatrization had been so extensive, that the larynx was not permeable to air, and the tube had to be retained.

This patient lived six years, and died afterwards from lack of proper attention, the tube having ulcerated through the œsophagus. It is also evident that one operation should have been sufficient in this case, as in all such cases the tube should be left in place until all active disease has ceased.

The second case is as follows: In May, 1876, a girl, æt. 28, presented herself at the Lyons Hospital for treatment, in the service of M. le Dr. Merle. She suffered from aphonia and very difficult and painful respiration of several weeks' duration.

The patient, not wishing to remain in the hospital, was given a prescription containing iodide of potassium.

Early in June the patient, no better, came for admission.

The medicine was continued, and a laryngeal examination decided upon next day, with a view to tracheotomy. During the night, however, the patient became much worse, and died before the interne could perform the operation.

The autopsy revealed great œdema and ulcerations over the cricoid and in the ventricle. This had destroyed the inferior vocal cords, and at their bases the cartilages were ossified.

In the Lyons *Medical Journal*, No. 26, page 262, for 1876, a successful case is reported. The case occurred in the service of M. Litievant, and is reported by M. Quiac. The patient had contracted syphilis in 1873, three years before coming under M. Litievant's observation. He received no treatment for the primary sore, but three months later entered a hospital, and was treated for secondary laryngeal trouble, and left improved. Had some laryngeal trouble for the next two years, but in January, 1876, became rapidly worse, and symptoms of asphyxia showed themselves.

On January 9th had two attacks, and on 10th entered hospital, where he had another, becoming asphyxiated and unconscious. On the 11th, at ten A.M., he was found in a dying condition—respiration suspended, cyanosis, and insensibility complete; pulse imperceptible.

Tracheotomy was performed, and gradually respiration was re-established.

The patient recovered consciousness in one hour. For the next eight days much pus was expelled through canula, which was changed on February 4th for a fenestrated one. The patient could now breathe through the larynx, and was encouraged to do so, and to speak. On February 15th the tube was finally removed, the patient being able to breathe quite freely, and to speak, the voice being somewhat hoarse. On February 26th a laryngoscopic examination showed some white spots in the vestibulum glottidis. The epiglottis was normal, and vocal cords nearly so.

On March 10th, two months after operation, the voice was good and strong, and the patient's general health good. Iodide of potassium had been given in from thirty to forty-five grains a day since the operation.

In tracheotomy we have then a most valuable aid in the treatment of the graver syphilitic lesions of the larynx, whether it be for œdema or ulceration, or the consequent contraction which often follows the latter

condition. By it we may at least prolong life, and thus, in many cases, gain time for curative procedures. In some cases the tube may have to be worn during life, but even in the worst cases this cannot be often necessary, when we remember the brilliant results of the instrumental treatment by dilation obtained by Schroetter, of Vienna, in laryngeal stenosis.

Note 1.—I take pleasure in expressing my thanks to Dr. J. H. Ripley, who sent me, after the operation, an experienced nurse from St. Francis' Hospital, who by close attention during five weeks greatly aided in the patient's recovery.

Note 2.—The nature of the case is my obvious reason for not giving the full names and addresses of the physicians who kindly assisted me at the operation.

Note 3.—The patient called to see me on October 31st, and reported himself as feeling quite well, and having enjoyed excellent health since I had last seen him in June. S. S. J.

UNUSUAL EFFECTS OF QUININE.

By FREDERICK D. LENTE, M.D.

In the "Reports on the Progress of Medicine" in the *New York Medical Journal* for August, 1878, is a notice of several cases, in which, after the administration of quinine in moderate doses, a profuse exanthem appeared which lasted several days, and was followed by desquamation lasting from two to three weeks. Two of the cases were observed by Prof. Koebner, of Breslau. In one case there was a repetition of the phenomena after a repetition of the dose. Dr. Ricklin, who reports the cases in the *Gazette Médicale*, was able to discover only four analogous cases in medical literature. But the "Report" states that Dr. Pflueger, of Berne, found the eruption to appear after the administration of the decoction of cinchona as well as after sulphate of quinine. In one of the cases the eruption resembled *urticaria*, but in this case the desquamation lasted three weeks. In all the cases the general symptoms were severe and even alarming; in one, that of a physician who took a gramme of quinine for facial neuralgia, "there was intense fever, delirium, dyspnœa, and all the signs of pulmonary congestion." Dr. Ricklin considers these cases important, "especially in view of the large number of pretended relapses of febrile exanthemata, particularly of scarlatina, which have lately been recorded."

Serious symptoms following the use of quinine are so rare (though not unfrequently alleged by non-professional persons, especially those under the care of homœopathic physicians) that the writer deems it of sufficient interest in this connection to refer to a few cases which came under his own observation a few years ago while practising in Cold Spring.

A delicate laundress in the employ of a neighbor of the writer required a tonic, and when he proposed quinine she stated that it had produced dangerous symptoms when administered on a former occasion. One of the ordinary elixirs of Calisaya was accordingly prescribed, and in a diminished dose. On his return home after an absence of some hours, his associate, Dr. G. W. Murdock, informed him that the first dose produced very unpleasant symptoms, and that, after the second, he was summoned and found her in a comatose state, with cold extremities, hot head, and symptoms of cerebral congestion. He combated these alarming manifestations with vigorous measures, including cupping of the temples, hot stimulating pediluvia, etc., and was obliged to remain with her four hours before she was out of danger. She afterwards informed the writer that a sister had been similarly, but not so seriously affected by a small dose of quinine.

Soon after this occurrence, the writer prescribed a moderate dose of quinine for a female domestic in the family of a gentleman boarding at Garrison's. He then proceeded to West Point, and some hours after, on his return, met a messenger who had been sent to find him with the message that the girl had been taken suddenly very ill. He found her recovering from the attack, which had presented symptoms similar to those above narrated, but in a much milder degree.

A lady patient of the writer's in the same neighborhood, informed him that quinine always weakened instead of strengthening her. He tried the experiment with small doses without her suspecting it, but she soon detected it by the peculiar prostration which it produced. He then tried the citrate of iron and quinine, but even this was detected in the same manner. At about the same time a case occurred in the practice of a medical acquaintance on Staten Island. A lady patient informed him, when he proposed to administer quinine, that it had always produced alarming symptoms; he, however, rather ridiculed the idea, and said he would give her a small dose and remain with her to observe its effect. He did so, and soon had reason to regret his experiment, as he was himself alarmed at the symptoms. What they were the writer did not learn, as the case was related to him by a friend of the patient.

These cases all occurred within a twelvemonth, and never before or since, in a large quinine experience, and with doses of every size (and he has recorded cases where an ounce was taken, *vide* H. C. Wood's *Mat. Med.*), has the writer met with a similar case.

Apropos of the eruptive phenomena, it may be well to state that during the prevalence of malarious fever in Cold Spring, some years ago, the attacks, in several instances, were ushered in by a profuse and typical *urticaria*, which disappeared quite promptly, whether in consequence of the full doses of quinine administered, or the full development of the febrile paroxysm it is impossible to say. In one female patient, who had repeated attacks of the fever, the latter could always be predicted by the appearance of the eruption. Last summer a gentleman at Saratoga Springs, a healthy man, applied to the writer for relief from a most troublesome attack of acute urticaria, for which, on close inquiry, he could ascribe no cause. He had not been exposed to miasmatic influences, as far as he was aware. He had taken a few powders prescribed by a homœopathic physician, but without any relief. His legs were considerably swollen, his face somewhat so. General baths of tepid water, impregnated with borax and carbonate of soda, were prescribed, which relieved the urgent symptoms. In view of the usual tardiness of the ordinary treatment of these cases, and also believing that we must look to the nervous system for the pathology of the disease, quinine in doses of ten grains was prescribed, to be repeated *pro re nata*. This was effectual. Relief would follow and continue for some hours. Then the eruption would commence to reappear, and, on a repetition of the dose, would soon commence to decline. After five or six doses he was entirely relieved. He continued well when last seen a couple of weeks later. There was no desquamation.

It is noteworthy that all the writer's cases, in which severe or unpleasant symptoms followed the ingestion of quinine, occurred in the person of females. The sex is mentioned in only two of Dr. Ricklin's cases.

One was a male, the other a female. Should quinine prove to be a remedy for urticaria, it might, in the light of these histories, be taken as an illustration of the doctrine of *similia similibus curantur*.

Since writing the above, and on taking up a late number of the Cincinnati *Lancet and Clinic*, it is noticed that Dr. G. W. H. Kemper asks the question: "Does sulphate of cinchonidia cause urticaria and puffiness?" He states that both he and his partner have observed the unusual number of cases of urticaria, especially among children attacked with malarial fever. It is quite common, he states, for families to use the sulphate of cinchonidia for fevers, and quite as common to be consulted by them for hives, nettle-rash, etc., also puffiness of face, eyelids, and extremities, independent of the urticaria. He says: "I have seen nothing on the subject, but have arrived at the conclusion that the sulphate of cinchonidia is the cause of the urticaria." He says, however, that he has known an individual, after taking sulphate of quinine, always to suffer from an erythema to such an extent that general desquamation followed. In this case, cinchonidia had the same effect. He adds: "I would be glad to hear from members of the profession upon this interesting and practical question. I formerly thought that *malaria* caused urticaria, but have abandoned that idea."

In the last edition of Ringer's "Hand-book," it is also noticed that he says: "Quinine, in one of my patients, always brings out a uniform red rash over the whole surface of the body. . . . . Desquamation, as free as after a sharp attack of scarlet fever, always follows the rash." He states that "it is well known that quinine can produce urticaria."

PALATKA, Florida, Nov., 1878.

Reports of Hospitals.

ALBANY CITY HOSPITAL, ALBANY, N.Y.

SERVICE OF DR. JOHN SWINBURNE.

(Reported by WILLARD H. MORSE.)

EXCISION OF THE ASTRAGALUS.

EXCISION of the astragalus, originally performed two centuries ago by Fabricius Hildanus, and since then repeated in numerous instances, has not met with much general favor among modern surgeons. A careful study of the literature of the subject shows that in comparison with other excisions, this one has been performed in a limited number of cases; and that although these statistics show in many cases highly satisfactory results, yet there have been, perhaps, as many fatal; and others in which the disease has returned, as in caries and necrosis; or, as in accidents, destructive inflammation has set in. Such eminent authorities as Gross, in this country, Sentin, in Belgium, and Giraldés, in France, have doubted the feasibility of the procedure on the ground that the facts from statistics constitute valid objections, and they urge the question whether sacrifice of the limb would not, in the majority of cases, be preferable. The dangers of the operation in after-results, and the decided difficulty of excision, with the chances of relapse or violent inflammation, are met on the other hand by the argument in favor of amputation. Other surgeons, as Syme, Bigelow, and Moreau, consider the chances of success greater than the dangers, and point with pride to the excellent recovery made by a large number of patients where the bone was exsected.

Possibly, as a recent writer suggests, we should make a distinction, and exsect when it is required for caries and necrosis, and amputate in compound fracture or luxation, for it seems proven that relapse in caries is by no means so formidable or frequent an accident as is inflammation, erysipelas, and gangrene, which supervene in a large percentage of excisions for traumatic causes. Nevertheless the particular circumstances of the case, and the common sense of the surgeon, should always direct to the course to be adopted.

The operation was performed at the Albany (N. Y.) City Hospital, September 7th, by Dr. John Swinburne, assisted by Dr. Lewis Balch. The patient was a middle-aged man suffering from caries. The first indication of the lesion was a swelling of the ankle, followed by an abscess, the contents of which were evacuated, and a seton introduced. Gradually the symptoms of caries became more marked, and systematic treatment proving useless, Dr. Swinburne advocated, after judicious consideration, the operation of excision. The joint was exposed at its anterior aspect by a flap of integument being raised, and this was followed by detaching the ligaments of the bone by the knife. The bone was then extracted by the forceps, and after bringing the foot to a right angle with the limb, the operation, which occupied forty minutes, was completed. An Esmarch's bandage controlled the hemorrhage, and the muscles were relaxed owing to the anæsthetic administered, so that the operation was easily effected, despite the many attendant dangers.

The limb was flexed at the knee so as to prevent retraction of the heel by the gastrocnemius. The wound kindly healed, the granulations having a healthy appearance. Two weeks from the day of the operation Dr. Swinburne reported the patient as doing well. On that day the limb and ankle were encased in a plaster-of-Paris bandage that the joint might become able for use as early as possible. An opening was left in the bandage, just over the situation of the wound, that healing might go on unimpeded. Antiseptic treatment was followed, nitric and carbolic acid lotions being used.

Although the joint is necessarily weak, and the tenderness extreme, the patient is doing well, and ultimate recovery with a comparatively useful limb will attest the success of the operation.

THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA.

NOTES OF PRACTICE AND PECULIARITIES OF TREATMENT.

(Reported for THE MEDICAL RECORD.)

DYSPEPSIA—ITS TREATMENT.

AMONG drugs, arsenic, in small doses, gradually increased, is a remedy of extreme importance. Where there is torpor of digestion joined with very marked sympathetic-nervous disturbances, the following prescriptions are of great value:

1. ℞. Sodæ bicarb..... ʒ iij.
   Acid hydrocyan. dil..... gtt. xlviii.
   Tinct. valeriani ..... f ʒ j.
   Syrup. zingiberis..... f ʒ ij.
   M.
   Sig. A teaspoonful thrice daily, in water.

2. ℞. Quiniæ sulph..... gr. xvi.
Strychniæ sulph..... gr. ½.
Acid. muriat. dil..... f ʒ jss.
Syrup. zingiberis.....q. s. ad f ℥ iv.
M.

Sig. Two teaspoonfuls in water, right after meals.

Where there is marked hepatic disturbance, the following prescriptions are excellent:

3. ℞. Acid. muriat. dil..... f ʒ ss.
Tinc. nuc. vom..... f ʒ ss.
Comp. infu. gentianæ.....q. s. ad f ℥ iv.
M.

Sig. A teaspoonful in water after meals.

4. ℞. Bismuth. subnit..... ʒ jss.
Pepsinæ..... ʒ jss.
Strychniæ sulph..... gr. j.
Tinct. cardamom. comp...q. s. ad f ℥ iv.
M.

Sig. A teaspoonful thrice daily, in water. If there is much flatulence, an increase is made in the quantity of bismuth and pepsin. If the case be merely one of gastric atony, the amount of strychnia is increased.

Where there is marked gastralgia, two to five drops of Fowler's solution are administered during the paroxysms. If this does not control the pain, a blister two inches square is applied to the epigastrium, and followed by a belladonna plaster six inches square.

Where the stomach is weak, its muscular action impaired, and its nerves over-sensitive, but little food should be taken into it at a time. The best diet is skimmed milk, half a pint every four hours. When milk is not well digested, lime-water is combined with it. Such foods as coffee, tea, and tobacco must, of course, be given up absolutely and at once. A sovereign article of diet is buttermilk. In buttermilk the casein of milk is coagulated and broken up, so that the stomach is spared two steps of the regular process of digestion. Another excellent preparation of milk is koumyss. It contains a good deal of carbonic acid. In all cases the stomach's work should be made easier by a diet consisting of eggs, milk, starchy vegetables, stewed fruits, and a little butter, with stale bread.

INFLAMMATIONS OF THE NASAL PASSAGES, EUSTACHIAN TUBES, AND MIDDLE EAR.

A solution of zinc is applied through the catheter. To do this, the catheter is first introduced, and then three or four minims of a solution (⅛ gr. to the f ʒ j.) of zinc is dropped into it. The zinc is forced through the catheter into the ear by means of Politzer's bag. In some cases the nitrate of silver is applied to the diseased surface by means of a post-nasal syringe introduced behind the soft palate. In old cases of catarrh of the middle ear, where the secretions have ceased, the attempt is often made to stimulate the membrane. This is done by means of ether. From 8 to 10 gtt. of ether are dropped into Politzer's bag. The patient takes some water in his mouth, and holds it there. A nose-piece is put in his nose, and just as he is swallowing the water, the ether is squeezed through the nose-piece into the passages.

With regard to constitutional measures: where the disease has been hereditary, and has run through many generations, the case will only go on from bad to worse, unless something be done to bring up the general tone. If there be any strumous diathesis, the bichloride of mercury is given internally for a long time, and in small doses.

The following is a good form of administration of the drug:

℞. Hydrarg. chlo. corrosivi..... gr. 1/20.
Elix. cinchonæ..... f ℥ ss.
M.

Sig. To be taken two or three times a day, after meals.

Iron and strychnia should be given in pill form. In old people, where there is very decided lessening of the secretions, ten-grain doses of the muriate of ammonia are given thrice daily. Before administering this dose, it should be dissolved in f ʒ j. of the elixir of cinchona, and this again suspended in half a pint of acid water. Muriate of ammonia, like iodide of potassium, is never administered to the stomach unless in a highly diluted state.

IDIOPATHIC PERITONITIS.

If the case is brought into the wards at the very inception of the disease, the patient is bled thoroughly from the arm. If the disease is of many hours' standing, the abdomen is covered with as many leeches as it will hold. After venesection, calomel is administered in doses of from one-quarter to one-half of a grain every hour. In connection with the calomel, opium is given in large doses. Opium induces quiet and prevents the exhaustion consequent upon horrible physical pain. Enough opium is given to keep the patient on the verge of narcotism. It had better be given in liquid form.

In the latter stages of peritonitis, blisters are always employed.

The first thing done, however, when the leeches have been removed, is to apply poultices; whether they be hot or cold makes but very little difference. Where there is a very marked tendency to feverishness, cold poultices are used. If the abdomen is too tender to bear the weight of the ice-bag, light flannel cloths wrung out of ice-water may be used. On the other hand, a warm-water dressing may be employed with advantage in very many cases. Warm water acts not only as a local derivative, but some of it probably oozes through the intervening tissues into the abdomen, and so acts directly upon the inflamed peritoneum as a soothing agent.

After the abdomen has been thoroughly poulticed for two or three days, blisters are used, provided the temperature of the body has not remained high. The blister should not be a small one—eight inches by ten makes a very good size.

Where there is any septic element in the disease, quinia is used with great benefit. Generally the stomach is not strong enough to bear it.

The patient must have but very little food in the first few days of the attack. The food which is given is that which leaves the least residuum of undigested matters, and therefore causes the least amount of peristaltic action on the part of the intestines. Milk, in repeated small doses, is the food usually given. At the end of a few days, solid articles are allowed. When there are symptoms of exhaustion late in the course of the attack, beef-tea is given as a stimulant. Alcohol is not only powerless, but even dangerous in the early stages of the disease. A few doses of brandy in the first few days of an attack of peritonitis may produce death.

With regard to the opening of the bowels during convalescence, a purgative or an enema is never used. These bring violently into play all the muscles of the

abdomen. Very often there will be a spontaneous movement on the fifth or sixth day without any medicine at all. If there is not such an opening, a small dose of castor oil is given at the end of ten days. If there is retention of urine, the water is, of course, drawn off by means of the catheter.

Great care is had during convalescence from peritonitis to prevent a relapse. No violent or gymnastic exercise is allowed for a long time afterward.

Progress of Medical Science.

CUPRUM AMMONIATUM IN THE TREATMENT OF NEURALGIA.—M. Bourdon has for several years used with success the ammonio-sulphate of copper in the treatment of neuralgias that prove rebellious to the ordinary methods of cure. M. Ferréol, of the *Hôpital Lariboisière*, has lately had recourse to the same drug in two cases of facial neuralgia, in which hypodermic injections of morphine and aconitine, arsenical preparations, the nitrate of aconitine, and tincture of gelseminum had proved utterly useless. He administered it in doses at first of 1⅓ grain, and then of 2⅔ grains per diem. The relief obtained was so rapid that M. Ferréol felt himself constrained to publish his cases.—*Bulletin de Thérapeutique.*

CASE OF PSORIASIS TREATED BY AN OINTMENT OF CHRYSOPHANIC ACID AND BY PHOSPHORUS.—R. Steele reports the case of a workman, fifty-three years of age, who had suffered for eight years from a psoriasis of the elbows, forearms, and right hip, which had defied all treatment. He was ordered $\frac{1}{50}$ grain of phosphorus internally three times a day, and inunctions with a salve, consisting of eight parts of chrysophanic acid to thirty parts of lard. The improvement was rapid, and after two months and a half the eruption had entirely disappeared.—*Med. Times and Gazette.*

DEATH FROM EXPLORATION OF THE RECTUM BY THE INTRODUCTION OF THE ENTIRE HAND. — Dandridge and Connor examined the pelvis of a man by Simon's method, with a view to obtain accurate information concerning a psoas abscess. They assert that absolutely no force was used, and that they did not go higher than the bifurcation of the aorta. Immediately after the exploration, however, symptoms of peritonitis set in, and the patient died. At the autopsy a rupture of the peritoneum, five inches above the anus, was discovered. The mucous membrane was also torn above the sphincter. This is another case proving that Simon's method is not entirely harmless.—*Deutsche Med. Wochen.*

ELASTIC CRAYON OF NITRATE OF SILVER.—Dr. Pajot takes a laminaria-tent, two millimetres ($\frac{1}{12}$ in.) in thickness, dips it in some thick mucilage, and rolls it in finely powdered lunar caustic. When it dries, he has a crayon, of the usual thickness of a stick of nitrate of silver, which can be introduced into the cavity of the uterus without fear of breakage. In the same manner applications can be made to other cavities, and, if necessary, with stronger remedies.—*Allg. Med. Cent. Zeit.*

TREATMENT OF SUPPURATING CAVITIES BY INJECTIONS OF SALT-WATER.—M. Houzé de l'Aulnoit, of Lille, draws attention to the value of salt-water as an injection into suppurating cavities. He cites a case of empyema in which the operation of thoracentesis was performed nine times, the cavity being washed out each time with some antiseptic fluid, but all without success. Finally he decided to try a concentrated solution of common salt, which has a specific gravity one-sixth greater than that of pus, a property which should enable it to displace the pus and bring it to the surface. The event proved the correctness of the theory; the saline injection caused the discharge of a large quantity of pus that had remained unstirred by the previous injections, and the cure was complete and permanent. M. Houzé de l'Aulnoit has used the saline injections in several other cases of suppurating cavities, with the same results, and has found the same solution equally useful in the treatment of wounds. The injections are not very painful. With regard to the strength of the solution used, it should be saturated if the action of density be required; otherwise, three to six ounces of salt to the quart are sufficient. Pure white salt should be used, as impure salt contains sand, which would prove irritating. The irritating action of sea-water on wounds is probably due to the sand it contains.—*Le Progrès Médical.*

EPISTAXIS ARRESTED BY SUBCUTANEOUS INJECTIONS OF ERGOTINE.—Dr. Porak reports three cases of persistent epistaxis in each of which the hemorrhage was controlled by a single injection of ergotine under the skin. He used a solution of 2 grms. (30 grs.) of Bonjean's ergotine in 30 grms. of glycerine, and injected 20 drops into the lip or cheek.—*La Tribune Médicale.*

CAMPHOR AS A HYPNOTIC.—Wittich has repeatedly administered camphor to relieve the insomnia which accompanies certain forms of mania, hysterical insanity, and hypochondria. He has found that, under such conditions, camphor acts much better than chloral, morphine, or bromide of potassium. He administers it by hypodermic injection. He dissolves it in olive oil, and the dose which he recommends is from one to one and one-quarter grain. Small doses are more certain to produce sleep than large doses. The sedative effect, as a rule, appears rapidly, and the sleep produced lasts several hours. The injection is to be repeated when the restlessness reappears.—*Jour. de Méd. de Bordeaux.*

A CASE OF PSEUDO-HERMAPHRODITISMUS FEMININUS, WITH ALVEOLAR SARCOMA OF THE UTERUS.—The subject of this account lived and worked as a girl, but her coarse voice and rough nature gave rise to the suspicion that she was a man. She died suddenly, at the age of 25 years. The abdomen was very prominent; below the symphisis there was a penis-like body, with a glans, but without a prepuce, which presented on its under surface a shallow furrow. This led into a narrow urogenital sinus, from which the sound penetrated, in front, through the urethra into the bladder, and, behind, into a pear-shaped vagina, a little over three inches in length. From the centre of the vaginal arch sprang the uterus, which was shaped like the finger of a glove, and was four inches in length; its posterior wall was incorporated in a very extensive tumor, of soft consistency (medullary alveolar sarcoma), which filled the inlet to the true pelvis. The left ovary was found in the left inguinal canal; it was as large as a plum, but presented no recognizable glandular tissue. The right ovary could not be found, and had probably been swallowed up in the tumor. The kidneys and abdominal lymphatic glands presented metastatic deposits. At one spot, where the tumor was unusually soft, it had ruptured, and death had resulted from hemorrhage into the abdominal cavity.—*Centralblatt f. d. Med. Wiss.*

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE YELLOW-FEVER COMMISSION.

THE coming meeting of the American Public Health Association, which is to be held in Richmond, Virginia, commencing November 19th, will doubtless be an interesting and profitable one. Not only is this result to be predicated on general principles, but there is a special reason why the deliberations of this learned and influential body should on the occasion referred to be of more than ordinary importance. As has been previously announced, the meeting is to be given up almost entirely to the discussion of the report of the Yellow-Fever Commission appointed by the Supervising Surgeon-General of the Marine Hospital Service. For a considerable time the gentlemen of the Commission have been collecting facts bearing upon the cause and prevention of yellow fever, and have been studying the particular phases of the epidemic in the localities in which the disease has been most prevalent. It is natural, under the circumstances, to expect that the report will be rich in information concerning many points which, from a sanitary point of view, may be of the utmost value. Certain it is, at all events, that the opportunities for fresh, if not original investigations, have been extraordinary, not only on account of the extent of the epidemic, but on account of the well-known ability of the members of the Commission and their full appreciation of the necessities of the occasion. In devoting the coming session of the Association to the consideration of reports and propositions bearing upon the subject in question, the members have shown an appreciation of the wants of the public, which cannot fail to react favorably upon any recommendations which may be made. In regard to the latter, great care should be taken by the Association that no opinions are offered which are not the result of the gravest deliberation and the calmest judgment. To this end, special pains should be taken to utilize all the information offered, not only that of the Commission itself, but that of voluntary contributors. The Association seems, however, to be alive to this necessity by asking for abstracts of papers, and by enjoining the preliminary examination of reports in committee.

The medical profession is naturally much interested in the success of this meeting of the Association, as upon such success depends a great deal of necessary and future legislation upon sanitary matters. It so happens that the Association is a scientific organization, which stands in the relation of an advisory body to the public at large. Composed in part of medical men who are in good repute as sanitarians, and in part by distinguished laymen interested in questions of general hygiene, it is an exponent of professional sentiment upon questions of public health and preventive medicine.

This being the case, the more effectually the Association can rise to the dignity of the present occasion, and the more conclusively it can prove by its deliberations the necessity of the reformatory measures which it may advocate, the better will be the chances for carrying them out by suitable legislation. We are quite confident that the result of the forthcoming meeting will be everything that can be anticipated, and that the report of the Commission will be of such a character as to prove the necessity for even more extended investigations of the epidemic, which must necessarily be carried on under the direct patronage of government by special sanction of the Congress of the United States.

No better opportunity could be offered than the present one for the making of necessary recommendations. Never before has the public at large been more interested in the suppression of any epidemic. Within the past two months the pestilence has marched fifteen hundred miles along the tortuous course of great rivers, until even the mountain city of Chattanooga has been smitten by it; has attacked one hundred and twenty-five thousand persons; has caused more than twelve thousand deaths; and has damaged the commerce of our nation to the extent of over two hundred millions of dollars. Under the circumstances, is it not reasonable to suppose that the people will be anxious to hear any suggestions which may be offered for the prevention of future epidemics, that the daily press will be ready and willing to herald the results of the deliberation to the world, and that upon such results must depend the creation of that public sentiment which shall not only invite, but demand the necessary legislation against future contingencies? Can we have any better reasons for wishing that the coming meeting of the American Public Health Association may be a brilliant success?

BODY-SNATCHING.

THE recent robbery of the grave of the late A. T. Stewart gives a complexion to body-snatching which it has heretofore never possessed even in the palmiest

days of Burke. It is certainly not venturing too far to say that from the common-place level of supplying material for the dissecting-room, resurrecting has risen to a fine art, from which large sums may possibly be realized.

Now that a precedent is established, it is impossible to say what the end may be, and to what lengths future criminals may not venture for the purpose of levying blackmail. In the instance in question, a body was stolen at night from a graveyard in the heart of the city, in a populous district, within a few feet of at least three thoroughfares, and while guarded, theoretically at least, by "the model police force of the world." Such being the fact, what may not be done with similar ends in view in the isolated cemeteries over the country; and what may not be ventured under the present premium of notoriety, and with the usual chances of large rewards for such criminality? From a purely professional point of view, there is reason for congratulation that the body was not stolen for anatomical purposes, and that the medical colleges here or elsewhere have been in no way connected with the transaction. This fortunate circumstance is due to the fact that the resurrectionists postponed their attempt until the body had been buried fifteen months, and was in such a state of decomposition as to be presumably useless for study.

THE SUPERVISION OF NURSES OF THE INSANE.

PROBABLY no better illustration of the necessity for the constant supervision of nurses of the insane can be given than that afforded by a recent investigation of charges against an attendant in the asylum at Columbus, Ohio. It seems that the attendant in question, a Mrs. B., conceived an original idea of disciplining patients, which was easy of application and very effectual. Whenever the patients in her ward became excitable they were stripped, thrown into a bath-tub, and their heads held under water until strangulation was threatened. This operation would be repeated until the patient, worn out from exhaustion, and almost limp, would be forced to promise obedience at all times and under all circumstances. Furthermore, the victim was warned that, in case she disclosed the method of punishment, she would be drowned. It is needless to say that, after practising this system of torture for more than a year, and extending it into the other wards, the discipline of the patients was such that the slightest motion of the finger was sufficient to insure the most abject obedience. Strange as it may seem, the physicians were in entire ignorance of the matter, and when they heard screams from the bath-room, were satisfied with the information that a patient was only a little troublesome. Now, when the brutality of this and other nurses is fully exposed by one of their number turning State's evidence, the superintendent of the asylum and the Board of Directors assure the public that "no stone will be left unturned to rid the institution of this class of inhuman keepers, should any remain."

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 23, 1878.

DR. JOHN C. PETERS, PRESIDENT, IN THE CHAIR.

ARTICULAR OSTITIS OF KNEE-JOINT—BONY ANCHYLOSIS—NECROSIS OF FEMUR—AMPUTATION OF THIGH.

DR. GEORGE F. SHRADY exhibited a specimen of disease of the knee-joint which he had removed, October 17th, by amputation of the thigh. The patient, a fair-haired, delicate lad of seventeen years of age, of German parentage, was admitted to the Presbyterian Hospital during the latter part of September.

During May, 1876, and without assignable cause, he was seized with a severe pain over the inner condyle of right femur. No distinct swelling of the part showed itself until four or five days afterward. The pain continued until the end of the fifth week, when an abscess upon the outer side of the thigh and just above the knee opened itself. Within four or five days after, a corresponding opening appeared on the inner aspect of the thigh. From that time until his admission to the hospital, three other openings formed in the neighborhood of the joint, two above in the anterior aspect of the thigh, and one below over the inner side of condyle of tibia. In the meantime the inner condyle of the femur expanded, the overlying tissues became consolidated, the leg gradually flexed itself upon the thigh, and the joint became anchylosed. When admitted to the hospital the knee presented the characteristic appearances of advanced tumor albus. There was a large, hard, globular swelling on the inner aspect of the knee, which involved the inner condyle of the femur, principally. No motion in the joint could be detected.

At the bottom of the opening above the inner condyle of the femur a sequestrum was discovered, the involucrum of which extended for a distance of seven inches above the articulation. Bare bone was also found by introducing a probe through the opening just above the upper line of the patella.

The examination of the other sinuses resulted negatively as regards dead bone. The joint itself was enlarged and contained a moderate amount of apparently gelatinous material; the overlying tissues were indurated and thickened; the patella was relatively displaced externally, and the leg partially dislocated outward and backward.

The general condition of the patient was much below par, and he seemed to have approached a time when some operation was demanded to save his life. It may be stated in passing that his liver was normal in size, that he had no albuminuria, and that there was no history of hereditary syphilis.

The question of exsection at first presented itself, but there were several circumstances that militated against the performance of such an operation. In the first place, the disease of the knee-joint appeared to be too extensive to guarantee any reasonable limit for the section. Secondly, the necrosis of the lower shaft of the femur, probably extending into the joint, necessarily offered a serious complication to such an opera-

tion; and thirdly, the patient's general condition did not appear to warrant the risk of a protracted cure with the possible attendant consequences of prolonged suppuration. Accordingly, amputation was performed. The patient did well since the operation, the wound for the most part having been healed by first intention.

The specimen, which had been nicely prepared by Dr. W. H. Porter, the curator of the hospital, presented several points of interest. The lower portion of the shaft was thickened, hypertrophied, partly eburnated, partly softened, and in a depression upon its posterior aspect contained two or three irregular sequestra. From the cavity which contained these pieces of dead bone sinuses ran in different directions to communicate with the openings which existed externally. The internal condyle of the femur was expanded above the level of the epiphyseal line, softened, and apparently contained degenerated inflammatory material. The same was true of the external condyle, but to a much less extent. A complete bony anchylosis existed between the inner condyle of the femur and the corresponding condyle of the tibia. The articular cartilages of external condyles of the femur and tibia were eroded in one or two places, and in the remaining portions thinned and semi-transparent. In the substance of the epiphyses of both the femur and tibia were circumscribed deposits of fatty material. This condition was also noted in one or two spots in the femur higher up. At one or two points the tissue of both epiphyses showed rarefaction. The condyles of the tibia were not much enlarged, but the bone below was remarkably atrophied, the compact tissue being a mere yielding shell. The tissues of the posterior portion of the joint were agglutinated together in one confused mass of softened gelatinous material. The patella was immovable, and was fused with the femur. The ligamentous tissues around the joint were infiltrated with fibrinous exudation, and more or less adherent to adjacent parts, but particularly to the internal condyle.

The medullary canal of the femur was irregular, due to the encroachment of inflammatory processes connected with the sinuses in the substance of the bone. At the point of section of the bone the canal was obliterated, the saw having just cleared the diseased tissue below.

The clinical history and pathological conditions of the specimen appear to point to a periostitis of the lower portion of the femur as the primary lesion, the spongy tissue of the articular extremities becoming secondarily involved in ostitis, and in turn destroying the portions of the articular cartilage and producing bony anchylosis. With such a condition of things, and such an extent of disease, amputation would appear to be the only remedy.

EXCISION OF THE HEAD OF THE FEMUR IN INTRACAPSULAR FRACTURE.

Dr. Joseph W. Howe presented a specimen of the above with the following history:

Mary Degnan, æt. 62, was admitted to Charity Hospital in March, 1876, suffering from intracapsular fracture of the neck of the right femur. The fracture occurred three months previous to her admission, and was occasioned by slipping from the door-step on her way out. She was taken to Chambers Street Hospital, and treated by means of Buck's extension for eleven weeks. On admission to Charity Hospital, a plaster-of-Paris splint was applied, which was kept on for two months without any result. Slight extension was then applied for six weeks, and a long splint to prevent caries of the foot and retain the limb in position. This, too, proved useless. She was then allowed to leave her bed with a bandage passed around the joint of the injured limb and curved around the neck, supporting the joint so that crutches could be used. In twenty-four hours this likewise had to be discontinued. Every movement gave great pain, and crepitus could be felt distinctly whenever the hand was applied over the joint and the limb moved. She remained in bed eleven months after this without making the slightest improvement. I then concluded, that as everything else had been tried, it would be best to remove the fractured elements of the bone. This was done by making a semilunar incision four inches in length, behind the great trochanter, opening the joint in the usual manner. I found in the cavity about a drachm of inspissated pus mixed with small particles of bone. The neck of the bone was completely absorbed from the globular head to the trochanter, and the only connection between the two was by means of a narrow band at its lower end, about an inch and a half in length. A sharp spicula of bone was found on the inner side of the lower fragment, and it was probably this which caused the pain on movement. The globular head and all *débris* in the cavity were cleared out, the cavity washed with a strong solution of carbolic acid, and the wound filled with oakum. Buck's extension and a long side splint were applied to the limb and retained for six weeks after the operation. At this time she was able to move in bed without pain, and ate with a good appetite, and in every way seemed greatly relieved. A plaster-of-Paris splint, with an opening over the posterior part of the joint, was then put on, and the wound healed as before after packing it with oakum from the bottom. Three months after the operation was performed the wound was completely healed; she was able to get out of bed and walk around on crutches without pain. The limb, however, from long confinement and inaction of the muscles, was completely useless. Although the joint was freely movable, she was unable to move it handy in any direction; flexure, extension, and rotation being altogether lost, simply and solely from atrophy and paralysis of the muscles. She is in the hospital yet, able to move around without pain in or near the hip-joint, except on stormy days. The knee-joint, however, is beginning to show signs of inflammation, and she complains considerably of it. In all other respects she is well.

Remarks.—There was no good reason why ligamentous union should not have taken place in the case. The woman was well preserved and in excellent condition even at the end of her long confinement in bed. She is in excellent physical condition now. The operation of excision should have been performed before the limb was rendered useless by long-continued inactivity and atrophy of the muscles. Indeed, in all cases of intracapsular fracture where there is no improvement at the end of three months, as evidenced by the presence of long crepitus, excision of the broken fragment or fragments should be performed. Of course, this rule does not apply to very old or debilitated cases. Splints and other appliances to induce ligamentous union are utterly useless after that period, and the patient then must remain a helpless invalid in bed during the rest of her life, or submit to an operation which at best will allow her to move around on crutches without pain.

Dr. Stimson thought that it was very difficult to make a diagnosis positively between intra- and extracapsular fracture. At a recent meeting he had presented specimens illustrating both conditions, and in which the usual distinctive features were reversed.

Dr. Mason believed that the operation described by Dr. Howe was unique.

Dr. Howe had not met with a similar one on record.

STRONGULUS MICRURUS IN THE CALF.

Dr. Liautard presented the lungs of a calf, with the following history: The specimen had been sent to him by a veterinarian of Newark. A stock-raiser had noticed that several of his calves died with the symptoms of bronchial irritation. A physician in the neighborhood was consulted, who pronounced the disease broncho-pneumonia. A veterinarian being subsequently called, made a post-mortem of one of the animals, and discovered the bronchial passages filled with small worms (strongulus micrurus). Dr. L. remarked that the disease presented but few symptoms, generally assumed an epizoötic form, and was rapidly fatal.

Dr. Gibney exhibited a beautiful fresh specimen of morbus coxarius in its third stage, for the purpose merely of making a preliminary report.

SARCOMATOUS TUMOR OF BLADDER.

Dr. L. A. Stimson exhibited a tumor of the bladder removed from a gentleman sixty-three years of age. When admitted to the Presbyterian Hospital in the early part of October, the patient complained of the frequent and painful passage of bloody urine. His first attack occurred in the early part of July, and two or three weeks after a fall from a buggy. For the previous four years he gave the history of attacks of so-called bilious colic, which, in connection with his bladder trouble, gave rise to the suspicion, in the mind of Dr. Stimson, of renal colic and the possible existence of vesical calculus. After unavailing efforts to reduce the irritability of the bladder, the patient was sounded for stone with negative results. A subsequent examination was also of a negative character. The use of the searcher was followed each time by blood in the urine for two or three days consecutively. Examination per rectum revealed enlargement of the prostate, and fulness and doughiness about the bladder, which condition was supposed to be due to cystitis. The existence of a tumor was suspected, but the suspicion could not be confirmed inasmuch as the condition of the patient forbade bimanual exploration. Ruling out the probability of the existence of a tumor in the bladder, pyelitis was thought of as a cause for his troubles. The patient died rather suddenly without a positive diagnosis having been made.

At the autopsy, and before the body was opened, bimanual palpation was performed and the existence of a tumor was made out. On opening the bladder the morbid growth, which proved to be a sarcoma three inches in diameter, was attached by a pedicle as thick as the finger to the posterior surface of the bladder, about four inches above the neck of the organ.

CALCULI IN THE BLADDER—RAPID LITHOTRITY.

Dr. E. L. Keyes presented four specimens (calculi), each of them interesting as illustrating some special point.

The first case illustrated the mildness of rapid lithotrity and its efficiency. The patient, a man of sixty-three, after a varied set of bladder symptoms, was examined by Dr. Van Buren in October, 1877, and a calculus detected. The patient could not remain in New York for operation, but returned to his native city, where a surgeon put him to bed for seven weeks while he was being relieved of his stone by ordinary lithotrity, and kept him, in all, from his business three months, removing considerable calculous material—phosphatic.

As the bladder symptoms continued, however, and his surgeon failed to find any further fragments to crush, the patient returned to New York in October, 1878.

Upon examination, one large and two small angular fragments were found in the bladder. The urine was highly ammoniacal and full of pus. Kidneys sound.

At a single sitting of rapid lithotrity, lasting about an hour (Keyes's lithotrite, Bigelow's washing apparatus), about one and one-half drachm of phosphatic stone was removed from the patient's bladder.

No more reaction followed this operation than had habitually attended a sitting by the old method. No anodyne was given excepting ℥ v. Magendie's solution hypodermically at the time of the operation. The ammoniacal odor rapidly disappeared from the urine; there was no chill, no fever. The intervals of urinating lengthened, the first day from one up to two hours, and in a few days reached three and four hours.

On the sixth night the patient slept all night without urinating, a thing he had not done before for several years. An examination ten days afterwards failed to detect any stone, and the patient left the city for his home.

Nothing could illustrate the advantage of rapid over slow lithotrity more forcibly than this case.

The second case was that of a man of sixty-eight, who had carried a smooth uric acid stone in his bladder for several years. This was totally removed at one sitting, by rapid lithotrity, in forty-two minutes. The stone was one and one-half inch in its long, and about three-quarters of an inch in its short diameter. The first crushing lasted twenty minutes, and four minutes' washing yielded 177 grains; the second crushing lasted six minutes, and four minutes' washing yielded 40 grains; the third crushing lasted four minutes, and two minutes' washing yielded 19 grains of fragments.

Here a stone weighing half an ounce is taken from the bladder in three-quarters of an hour. Recent exploration of the bladder proves the absence of stone. The patient made a good recovery. He had no chill, and but little fever after his operation. The case is a typical one as illustrating the value of rapid lithotrity.

The third specimen shown by Dr. Keyes was a number of small phosphatic calculi of varied size and a mass of mortar-like material, one side of which was flat and blood-stained.

These specimens were taken from an old gentleman after death, upon whom no operation had been attempted, on account of his general condition during life. The specimens were shown to illustrate the method of formation of phosphatic calculi within a diseased bladder. The mortar-like mass had been torn off from a semi-ulcerated surface within the bladder to which it was firmly adherent. The smaller calculi represented phosphatic accumulations around small nuclei which had become detached from this mass, while the mortar-like (phosphatic) material itself was deposited only (and quite firmly) upon a roughened, eroded surface of the bladder-wall. On no other portion of the mucous membrane was there any deposit.

Dr. Keyes reaffirmed the proposition formulated by Thompson, that phosphates, amorphous or crystalline, are not apt to accumulate into stone in the bladder, excepting upon a nucleus, or upon rough-

ened, ulcerated, excoriated portions of the bladder-wall. A smooth mucous membrane is the best guarantee against the formation of phosphatic stone; but, unfortunately, a bladder which is sufficiently inflamed to allow the precipitation of crystalline phosphates very rarely remains long smooth.

HAIR-PIN IN THE FEMALE BLADDER.

Dr. Keyes's fourth case, which with all the foregoing, had been seen in connection with Dr. Van Buren, was that of a female child of six years and a half, who had introduced a hair-pin two inches long into her bladder fourteen months previously, namely, at the early age of five years and two months. The child announced to her mother that she had lost the pin; but as a physician failed to find it upon exploration, she was disbelieved. Bladder symptoms soon came on, and these had been variously treated for a year or more before the child fell into the hands of Dr. Morje, who brought her to Dr. Van Buren.

The child had a hymen which was not broken. The small bladder had contracted laterally upon the hair-pin, which seemed immovably fixed in it.

It could readily be seized, but it would not turn around in Gallin's hair-pin extractor, which was used after the urethra had been dilated with Guyon's dilator (devised for perineal lithotrity).

As the vagina could not be used for the finger, on account of the hymen, and it was not considered wise to dilate the urethra sufficiently [illegible] small a child to pass a finger into the bladder, one [illegible] hair-pin was seized in the bite of a strong [illegible] steps bent upon itself, thus disengaged from the [illegible] and the pin was then easily extracted. Some calculous matter was afterwards crushed up and washed out with Bigelow's washing apparatus.

No incontinence, and no bad symptoms followed. The clitoris of this infant was simply enormous.

THE PHILADELPHIA MEDICAL SOCIETIES.

An Abstract of their October Meetings.

(Prepared for THE MEDICAL RECORD.)

THE PATHOLOGICAL SOCIETY.

THE Society was called to order at 8 P.M., Thursday, October 10th, DR. H. LENOX HODGE, President, in the Chair.

OVARIAN CYST.

DR. FRANK B. GETCHELL related the case of a widow lady, forty-two years of age, who had never been pregnant. Eighteen months previous to date she had complained of enlargement of the belly with pain. This enlargement had increased rapidly and had been diagnosticated as due to an ovarian cyst. Ten days before operating the cyst was tapped and a pint and a half of fluid drawn off. This fluid was found to contain the so-called ovarian cells of Dr. Drysdale. Dr. Engelmann, of St. Louis, who was present on the day of the operation, was confident that the case was one of fibro-cystic tumor, although the fluid was not that of a fibro-cyst, which gelatinizes on exposure to the air. On opening the abdomen previous to the removal of the growth, the cyst was found to be covered with a net-work of large veins, and to be adherent to neighboring tissues on all sides. It was first separated from the bowels, and then a quart and a half of fluid withdrawn by the aspirator. There was almost no stem at all, but what pedicle could be found was stretched and a ligature put on. After removing a large part of the sac it was discovered that a good deal of it was below the ligature. This part was not cut away. The woman reacted well after the operation, but in thirty-six hours a peritonitis, which proved fatal, supervened. The tumor was found not to be fibro-cystic. The introduction of the drainage-tube, it was thought, might have prevented the peritonitis. Remarkable facts connected with the case were that the woman had menstruated until February, 1878; that the sound could be introduced into the womb four inches, and that the only relief which the woman secured from her pain was obtained by pressure.

DR. MORRIS LONGSTRETH presented the specimen with a record of the post-mortem appearances. The body was emaciated. The incision made through the abdominal walls had completely healed. The kidneys and part of the ureters were dilated by reason of the pressure of the cyst upon the ureters. On several spots on the peritoneum, especially around the pelvic region, small bodies of the size of a pea, having a whitish color and of soft consistency, were found. They were seated on the peritoneum or buried in inflammatory material, and presented wart-like projections.

DR. TYSON had examined the fluid of the cyst and found ovarian cells and albumen in considerable quantities.

DR. HODGE considered the case as one of much rarity. He had had a fatal case in his own practice in which there had been fibroid tumor of the uterus, cyst of the Fallopian tube, and dilated kidney.

The Society then proceeded to the election of its officers for the ensuing year.

The Society met on Thursday evening, October 24th, DR. H. LENOX HODGE, the President, in the chair.

TUMORS IN THE LARYNX.

DR. CARL SEILER presented a report of six cases of tu[illegible] in the larynx.

CASE [illegible] Æt. 32. Symptoms of hoarseness with unilateral [illegible]ysis of the vocal cords. Laryngoscopic exami[illegible]n revealed a small nodule on the free edge of the [illegible]ft vocal cord projecting slightly into the glottis. An eighty-grain solution of nitrate of silver caused absorption of the growth.

CASE II.—Æt. 52. Had complained of loss of voice for eighteen months. The laryngoscope showed a nodule the size of a mustard-seed imbedded in the edge of the left vocal cord, which was also paralyzed. Nitrate of silver failed to cause absorption, but the case was materially improved by the use of electrolysis, passing the current for thirty seconds at a time.

CASE III.—Æt. 21. Complained of failure of voice. Nodule on the middle of the right cord absorbed by nitrate of silver.

CASE IV.—Æt. 22. Two nodules on the left cord. Inhalations of solutions of nitrate of silver tried without effect.

The class of cases, said the speaker, illustrated by the above examples were exceedingly rare. Thus far only two cases had been reported in this country. These two occurred in the practice of Dr. Lefferts, of New York. Türck, of Germany, had reported some seven or eight cases. Three of the cases had occurred in professional singers.

CASE V.—Æt. 24. Complained of dryness of throat and huskiness of voice. Mucous membrane injected. Bright red tumor the size of a pea on the right vocal cord. In attempting to sing low notes there was no vibration of cord. Tumor after removal found to be fibro-cellular. Operation produced entire cure.

CASE VI.—Æt. 12. Large papillomatous growth filling cavity of larynx. Several pieces of it removed by forceps at each sitting, but no decrease in its size. Tracheotomy performed by Dr. John Ashhurst, Jr. Fully a half ounce in weight of substance of tumor had been removed by forceps. The operation of clipping the growth may have turned growth from papilloma into epithelioma, as suggested by Braun, of Vienna.

DR. COHEN thought that the removals of such growths by the mouth were among the most difficult operations in surgery.

DR. J. E. GARRETSON had had a case similar to Dr. Seiler's sixth case. It was that of a boy, æt. 5, whose breathing was very difficult. Laryngoscopic examination showed a growth associated with the vocal cords. Tracheotomy was performed and followed after some days by thyrotomy and a tumor removed as large as the end of a finger. Growth found to be cauliflower papilloma. After removing growth site was cauterized with London paste. Patient could speak in two weeks after operation. The doctor thought that it was much better to perform thyrotomy in all such cases than to scrape away the growth piecemeal through the mouth.

DR. H. LENOX HODGE thought the danger to life in such cases was mainly due to the tendency to the production of spasm of the larynx.

TUBERCULAR KIDNEY.

DR. LOUIS STARR presented a specimen taken from a post-mortem at the Episcopal Hospital. The man had died of phthisis, but his left kidney was found to be enlarged and fatty, and the right kidney to be lobular. The ureter of the right kidney was brittle and its pelvis dilated. There were also a number of small nodules found in this kidney.

DR. ROLAND CURTIN mentioned a case of his in which both ureter and pelvis of a kidney had been found dilated following catarrh of the bladder.

CHRONIC ARTHRITIS.

DR. H. LENOX HODGE presented for Dr. John Ashhurst, Jr., the limb of a child with congenital syphilis, whose knee had been opened for the purpose of performing excision of the joint, but in which finding not only the knee-joint, but also the lower part of the femur entirely disorganized, amputation had been performed higher up.

PRIMARY INTRATHORACIC CARCINOMA.

DR. WILLIAM PEPPER presented a specimen obtained from a post-mortem held at the Philadelphia Hospital, showing a large carcinoma of the mediastinum involving the bronchial and cervical glands. The case had been complicated by a large pleuritic effusion on the left side.

THE COUNTY MEDICAL SOCIETY.

The Society met on Wednesday evening, October 9th; DR. H. H. SMITH, President, in the chair.

THE INTRAVENOUS INJECTION OF MILK IN FUNCTIONAL AND ORGANIC ANÆMIAS.

DR. WILLIAM PEPPER read a paper with the above title, giving an account of two cases in his hospital practice, in which milk had been injected into the veins.

CASE I. was that of a female, aged thirty-two, who was admitted to the University Hospital, in the spring of this year, in a condition of extreme anæmia and spinal irritability. The operation of injecting the milk was performed by Dr. Charles T. Hunter. The cow from which the milk was obtained was brought into a room adjoining that in which the patient lay. At the first injection five ounces of milk were thrown into the circulation. Twenty-seven days later, six ounces were injected. The immediate effects of the injection were remarkable in both cases. They were: great respiratory disturbance, capillary injection, etc., a rapidly developing and disappearing urticaria. From the time of the second operation, July 17th, the patient's condition improved greatly; she gained flesh and color, and her nervous phenomena disappeared.

CASE. II. was that of a sailor, thirty-three years of age, who was admitted to the University Hospital on May 6th, 1878, with Addison's disease. The regular proportion of red globules had been reduced seventy-five per cent. On June 15th, six ounces of milk from the same cow were injected into the median basilic vein. One week later the operation was repeated, and again on June 27th. The patient died soon after the third injection, a post-mortem examination revealing medullary *anæmatosis* in the marrow of the long bones and sacculated suprarenal capsules.

With regard to the transfusion of blood, Dr. Pepper held: 1. That transfusion must be dexterously performed, and that carefully defibrinated blood must be used; 2. That not more than seven ounces should be injected at one time; 3. That in all cases dangerous nervous and vascular symptoms were liable to follow the operation; 4. That these after-symptoms might be moderated by large doses of quinia administered before the operation; 5. That albuminuria might follow the operation; 6. That the transfused blood stimulated the circulation and nutrition strongly for a short time; 7. That transfusion of blood might be employed for temporary relief in functional diseases, time being thus gained for the use of other measures; 8. That transfusion was of no use in serious organic disease, the risks of transfusion being great where the heart and circulation were weak.

With regard to intravenous injection of milk, the speaker was of the opinion: 1. That none but fresh milk at a temperature of 100° should be used; 2. That not more than six ounces should be injected at one time; 3. That the after-effects were as severe as those following the transfusion of blood; 4. That there was no danger of embolism following the intravenous injection of milk; 5. That albuminuria generally followed the operation; 6. That the stimulating effects of the milk were felt immediately; 7. That milk did not produce as lasting effects as blood; 8. That the intravenous injection of milk in organic anæmia might hasten the result (see Case II. above).

DR. CHARLES T. HUNTER, describing the operation, said that he made an incision one-half inch long, over the course of the median, basilic, or cephalic vein, dissected out the vein, raised it on a grooved director, and then plunged the canula directly into it. He did not think it necessary to tie the canula *in situ*, as it was sufficiently constricted by the wall of the vein.

DR. H. H. SMITH wished to know why it was not possible to enter the vein through the skin, and without dissecting it out.

DR. HUNTER replied, that, upon one occasion, in trying to enter the vein without an incision, his canula had passed right through the vein; that in another case he had to make seven punctures before his canula entered the vein; that the incision could be made quickly and gave rise to little or no pain.

Dr. Benjamin Lee wished to know the size of the canula used.

Dr. Hunter said that his canula was silver-plated, and from one-eighteenth to one-twelfth of an inch in diameter, being thus somewhat smaller than the cephalic vein itself; was provided with a stop-cock, and connected with the glass funnel by a rubber tube twenty-four inches long and one-sixth of an inch in diameter. In speaking of a remarkable case of the intravenous injection of milk, which occurred here late in the fall, and in which the milk used was that of a goat, Dr. Hunter said that the effects of the first three injections were remarkable. The patient was very low from hemorrhage from the bowels following typhoid fever. When the milk was injected the veins were collapsed, and the patient was entirely unconscious, while in the course of six or twelve hours after the operation the veins had filled out, and he was conscious and intelligent. Dr. Hunter referred to the case of milk-injection for gastric ulcer, reported as performed in May or June of this year, by Dr. Bullard, of the Demilt Dispensary, New York City.

Dr. H. H. Smith wished to inquire if it were not possible that the after-effects of the milk-injection were due simply to the presence of a stimulating liquid in the blood. He instanced the effects following the injection of salt and water in Asiatic cholera.

Dr. Pepper made answer that Dr. Smith's question was one which could not be definitely answered at the present day, and when our knowledge of the subject was so imperfect. He had no doubt that in many cases the milk-injections merely served to tide the system over a period of depression.

Dr. Frederick P. Henry did not at all agree with Dr. Pepper in his division of anæmias into functional and organic. Anæmia, he argued, was always a change in the structure of the blood, hence structural, *i. e.*, organic. With regard to the albuminuria following milk-injection, he wished to call the attention of the Society to the fact that albuminuria always follows the ingestion of a large amount of the white of egg.

Concerning the respiratory difficulty following the the intravenous injection of milk, Dr. James C. Wilson called to mind a lecture by Ponfick, in which it was stated that the same symptom was consequent upon diseases in which the hæmoglobin of the blood was destroyed.

Dr. I. Guitéras said that where the hæmoglobin of the blood was being destroyed there was always a species of jaundice present. Here there was none. He thought the dyspnœa entirely mechanical.

Dr. H. H. Smith thought that the dyspnœa was due to the formation of casein in the blood; but, then, Dr. Gaillard Thomas had shown that milk resembled chyle very closely in its constitution.

Dr. C. T. Hunter wished to remark in closing that he always considered it necessary to strain the milk, in all cases, before injecting it, and that he thought it dangerous to cleanse the apparatus with carbolic acid before using it. as suggested by some.

The Society then proceeded to the transaction of private business.

The Society met on Wednesday evening, October 23d, Dr. H. H. Smith, President, in the chair.

A large part of the evening was spent in the transaction of urgent business.

Later, Dr. W. R. D. Blackwood read an elaborate paper, reviewing at length the flagrant abuses dependent upon the system of "free dispensaries." His facts and arguments, though cogent, are not new to the profession. His paper was referred to the Committee on "Hygiene, and the Relations of the Profession to the Public."

The Society then proceeded to the transaction of private business.

Correspondence.

THE GERM THEORY OF DISEASE.

To the Editor of The Medical Record.

Sir:—In an interesting lecture on the Germ Theory of Disease, delivered before the Philadelphia Social Science Association, Oct. 17, 1878, and published in the last number of The Medical Record, Prof Jos. G. Richardson says: "These results of mine were corroborated soon after by the researches of Dr. Neftel, of New York, upon some of the inferior animals, in regard to which he informs us," etc. This leaves the reader under the impression that Prof. Richardson's results were obtained before mine, when, on the contrary, I have the priority. Dr. Richardson's article appeared in the *Amer. Jour. of Med. Sciences* in July, 1868, his experiments being made in May of the same year. I read a paper before the New York Med. Journal Association, June 19, 1868, which was printed in The Medical Record of July 15, 1868, and in which I gave the results of my experiments made in the spring and summer of the previous year, 1867, in Virchow's Pathological Institute, as the dates of some of the experiments show (p. 227, Med. Rec., July 15, 1868). These very numerous experiments were made not only on frogs—inferior animals—but also on mammalia—dogs, etc.—and always gave the same positive results. Besides, they were witnessed by my friends Prof. Kühne, Cohnheim, and others, who considered them entirely novel and important.

After my arrival in New York, finding no appropriate laboratory, I was obliged to discontinue my experiments, and therefore made public the preliminary results, purposely abstaining from making far-reaching pathological and therapeutical generalizations, which, even at that time, would be justified by my experimental researches. I left them to those numerous investigators who immediately followed in my path, and possessed all the means of demonstrating them.

Very truly yours,

Wm. B. Neftel.

16 East Forty-Eighth Street, Nov. 9, 1878.

Iodoform administered internally controls functional cardiac palpitation. A combination of iodoform and ordinary collodion is excellent in reducing glandular swellings, in orchitis, epididymitis, chronic swellings of the knee-joint, etc. So says Prof. Moleschot, of Turin.

The Pith of Dried Corn-Stalk as a Uterine Tent.—Take a joint of dried corn-stalk, strip off its cuticle, press the pith slowly and firmly between the thumb and finger. Continued pressure reduces it to four or five times less than its original size. Its dilating power is equal to sea-tangle or sponge. It is easy of introduction, easily overcomes slight resistance, dilates effectually, but slowly. Dr. W. T. Goldsmith. of Atlanta, who recommends them, has used them for seven years without a single accident.

New Instruments.

ATOMIZING INSTRUMENTS.

No. I.—CODMAN & SHURTLEFF'S ATOMIZING APPARATUS.

It is our intention in this and succeeding numbers, to notice the respective merits of the different apparatus for atomizing fluids. We shall naturally commence with that of Codman & Shurtleff, of Boston, which has been so long before the medical public, and which, as a steam apparatus, was, as far as we know, the pioneer in the field.

The medicine cup is attached directly to the lamp shield, while the glass face tube is supported upon a brass adjustable standard, and fastened to the latter by means of an india-rubber band. This upright, by means of a slot and screw arrangement in the base of the stand, can be adjusted within reasonable limits, to different distances from the atomizing tubes.

The apparatus consists of the sphere-shaped brass boiler (*A*), steam outlet tube (*B*), with packing-box (*C*), formed to receive rubber packing, through which the atomizing tube (*D*) passes, steam-tight, and by means of which tubes of various sizes may be tightly held against any force of steam by screwing down its cover while the packing is warm. The safety-valve (*E*) is capable of graduation for high or low pressure by the spring and screw in its top. (*F*) represents a wooden button or handle, by which the boiler may be lifted while hot. Then is seen the medicine-cup and cup-holder (*G*), the support (*II*), base (*I I*), the glass face-shield (*J*), with oval mouth-piece connected by the elastic band (*K*) with the cradle (*L*), whose slotted staff passes into a slot in the shield-stand (*MM*), where it may be fixed at any height or angle required by the milled screw (*N*).

The shield-stand is formed into a handle just above the waste-cup (*O*), and its base is formed to receive and hold this cup.

The boiler is supplied with water through the funnel-shaped orifice, into which the safety-valve is screwed.

All of its joints are *hard soldered* and cannot be separated by any heat short of redness, or any pressure attainable with the lamp. The manufacturers assure us that each apparatus is carefully tested to a pressure of more than one hundred pounds to the square inch.

The spirit lamp (*P*) is of brass, and is provided with means of graduating the flame, and with an extinguisher.

The waste-cup, medicine-cup, and lamp, are held in their places in such a manner that they cannot fall out when the apparatus is carried or used over a bed or otherwise. The apparatus is contained in a strong wood box 7½x4x8 inches; it can be carried from place to place by the practitioner without removing the atomizing tubes or the water; it can be unpacked and put in position for use very quickly and conveniently.

The working of the apparatus is admirable, there is no spurting from the atomizing tube, the delivery of the spray is uniform, and its projection sufficiently forcible for all practical purposes. The wooden handle to the boiler is a great convenience, as is also the adjustable standard for the face-shield, but the attachment of the face-shield itself by means of an india-rubber, is unhandy, and does not compare in case of adjustment with the ordinary spring clasps now so much used.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 3d to November 9th, 1878.

YEOMANS, A. A., Capt. and Asst. Surgeon. Granted leave of absence for one month on Surgeon's Certificate of Disability, with permission to leave the Department. S. O. 229, Dept. of Texas, Oct. 29, 1878.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 9, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Nov. 2, 1878.	0	14	68	2	3	84	0	0
Nov. 9, 1878.	1	14	72	1	1	45	0	0

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE, WASHINGTON, D. C., Nov. 9, 1878.

NATIONAL QUARANTINE REPORT.—Abstract of Sanitary Reports received during the past week under the National Quarantine Act:

New Orleans, La.—There were 11 new cases of yellow fever, and 148 old cases reported, for the week ending yesterday evening. For the past twenty-four hours, no new cases and 2 deaths. Quarantine raised on the 5th inst. Total cases, 13,406—subject to revision. Total deaths, 4,010.

Morgan City, La.—There were 8 cases of yellow fever and 3 deaths during the past week. Total cases to yesterday evening, 571; deaths, 105.

Mobile, Ala.—During the week ending yesterday evening there were 35 cases of yellow fever and 9 deaths. Total cases, 259; deaths, 68.

Pass Christian, Miss.—7 new cases of yellow fever and 1 death for the past week. Total cases, 196; deaths, 21.

Ocean Springs, Miss.—For the week ending yesterday noon there were 4 cases of yellow fever and no deaths. Total cases, 150; deaths, 30.

Hernando, Miss.—10 cases of yellow fever and 5 deaths for the week ending Nov. 2d. No cases and one death during the past week. Total cases, 175; deaths, 69.

Dry Grove, and Lebanon Church neighborhood, Miss.—Since Oct. 19th, there have been 18 new cases of

yellow fever and 8 deaths. No new cases and but 1 death for the week ending Nov. 6th. Total cases, 125; deaths, 52. Crystal Springs, Miss., near Dry Grove, has, so far, escaped the fever.

Memphis, Tenn.—During the past week there were 33 deaths from yellow fever. Total deaths to the evening of the 7th, 2,997.

Chattanooga, Tenn.—9 new cases of yellow fever and 4 deaths during the past week. Total cases to yesterday evening, 444; deaths, 133.

Cairo, Ill.—During the two weeks ending yesterday there were 8 new cases of yellow fever and 3 deaths. The last case occurred on the 4th and the last death on the 6th inst. Total cases, 83, not including some doubtful cases. Total deaths, 44. Heavy frost the 8th inst.

Vicksburg, Miss.—There were 11 deaths from yellow fever during the past week. No deaths during the past twenty-four hours. 6 deaths during the week in the country near Vicksburg.

Delta, La.—4 deaths from yellow fever during the past week.

Decatur, Ala.—During the week ending last evening there were eight cases of yellow fever and one death. Total cases, 196; deaths, 43.

Gallipolis, Ohio.—No new cases of yellow fever since Oct. 26th. The last death occurred Oct. 27th. Total cases, 65; deaths, 37—not including 6 deaths which occurred on the steamboat John Porter.

Key West, Fla.—No yellow fever since Oct. 13th. The U. S. troops returned to Key West on the 7th inst.

Havana, Cuba.—24 deaths from yellow fever and 4 from small-pox for the week ending Nov. 2d.

Lambayeque, Peru.—For the week ending Oct. 12th, sporadic cases of yellow fever are reported.

Martinique.—There were no deaths from preventable diseases in the island of Martinique during the week ending Oct. 9th.

Bermuda.—During the two weeks ending Oct. 20th, there were 6 deaths from all causes out of a population of 15,293, including 8,218 military and naval force. The Bark Blackpool, which left Bermuda quarantine for England, Oct. 22d, had three or four cases of yellow fever on board.

Japan and China.—Dr. Simmons, Sanitary Inspector for the Japanese Government for the port of Yokohama, reports, under date of Oct. 10th, that he regards the occasional reported cases of cholera in Japan during the past summer as cholera morbus, and not malignant, or Asiatic, cholera. On the 2d of October, however, malignant cholera broke out in Nagasaki, and in 8 days there had been 58 cases and 10 deaths. Cholera has existed in Shanghai, China, for several months, and as Nagasaki is the first port of Japan entered by vessels from Shanghai, Dr. Simmons regards the outbreak as a new importation, but owing to the lateness of the season, and the sanitary measures instituted by the Government he does not anticipate a spread of the disease.

Europe.—In 149 cities and towns of the German Empire, having an aggregate population of 7,369,009, there were, during the week ending Oct. 12th, 5,470 births, and 3,539 deaths from all causes, being an annual death-rate of 25 in 1,000 of the population. Wiesbaden shows the lowest death-rate, 11.2, and Chemnitz the highest, 33.8. The total deaths include 80 from enteric fever, 127 from scarlet fever, and 154 from diphtheria. No deaths occurred from cholera, yellow fever, small-pox, or typhus fever.

Vienna, Austria.—During the two weeks ending Oct. 19th, 700 deaths are reported out of a population of 727,271, being an annual death-rate of 25.53 per 1,000 of the population. The total deaths include 15 from small-pox, 5 from enteric fever, 11 from scarlet fever, and 46 from diphtheria.

Hamburg.—During the week ending Oct. 12th, there were 53 deaths from typhus fever, 10 from scarlet fever, and 39 from diphtheria and croup.

Great Britain.—In 23 large cities and towns of the United Kingdom, having an aggregate population of 8,373,953, there were 6,095 births during the week ending Oct. 19th, and 3,371 deaths from all causes. In 21 of these cities there were 14 deaths from small-pox, 184 from scarlet fever, 22 from diphtheria, and 90 from fevers, principally enteric.—JNO. M. WOODWORTH, *Surgeon-General United States Marine Hospital Service.*

—Up to the time of going to press, and since the foregoing report was made, the yellow fever has shown such a tendency to decline as practically, in most of the localities named, to cease as an epidemic.

DR. ALLAN MCLANE HAMILTON will give four clinical lectures upon Nervous Diseases at the Hospital for Epileptics, Blackwell's Island, on Friday, Nov. 22d, and the succeeding Fridays. The boat leaves the foot of 26th Street, East River, at half-past one. Gentlemen wishing to attend will please send their names to Dr. Hamilton, No. 2 E. 33d Street.

THE AMERICAN ACADEMY OF SCIENCES.—Dr. William A. Hammond gave a reception at his residence on Thursday evening, November 7th, to the members of the American Academy of Sciences. There were also present a number of distinguished medical gentlemen, among whom were Profs. J. C. Dalton, J. W. S. Arnold, J. C. Draper, J. W. S. Gouley, M. A. Pallen, H. G. Piffard, J. L. Little, Jos. W. Howe, F. D. Weisse; Drs. Meredith Clymer, M. H. Henry, E. C. Spitzka, J. C. Davis, and others.

THE YORKVILLE MEDICAL ASSOCIATION.—The tenth anniversary of the Yorkville Medical Association was held on Tuesday evening, Nov. 12th, and was made the occasion of a banquet at Seighortner's. The meeting was called to order by the Chairman of the Association, Dr. John Shrady, of Harlem, N. Y., when the annual oration was delivered by Dr. James R. MacGregor, after which the members adjourned to the supper-room. The chairman, in some happy remarks, welcomed the guests to the hospitalities of the occasion. Dr. A. N. Brockway offered the toast of the Yorkville Medical Association, which was responded to by Dr. W. V. White. Dr. C. W. Packard replied to the sentiment of the Medical Profession, and Dr. Geo. F. Shrady to that of the Medical Press. Speeches were also made by Dr. W. H. Studley, and by the following of the invited guests: Drs. Allan McLane Hamilton, L. D. Bulkley, R. A. Barry, H. D. Noyes, H. L. Hanks, and R. L. Parsons. Dr. John Shrady read an amusing account of the Humors of the Lying-in Room, which gave rise to much merriment, as did also a facetious poem by Dr. F. A. Thomas, on the experiences of a successful quack.

ERRATA.—By typographical errors in the notice of "The Throat and its Diseases," No. 418, p. 373, EDDY appears for ELSBERG, and *aqua ad* for *aquæ ad.*

LEFT-HANDEDNESS.—At the late meeting of the British Association, Dr. H. Muirhead made a communication on "*Left-handedness.*" He thought it depended on which half of the brain took the lead. Left-handedness once begun in a family was likely to run in it. It was a curious fact that left-handed people had the left foot one-eighth to one-third of an inch longer than the right.

Original Communications.

TRACTION IN THE TREATMENT OF CLUB-FOOT.

By NEWTON M. SHAFFER, M.D.,

SURGEON IN CHARGE OF THE NEW YORK ORTHOPÆDIC DISPENSARY; ORTHOPÆDIC SURGEON TO ST. LUKE'S HOSPITAL.

For the purpose under consideration we may say that, viewed mechanically, the normal foot forms with the leg a lever of the first kind, where the *fulcrum* (the inferior articulating surface of the tibia) lies between the *power* (the muscles of the posterior part of the leg) and the *resistance* (the anterior part of the foot). If the foot be raised from the floor and extended in mid-air, this action of the lever is illustrated, though, of course, the anterior tibial muscles become the power, and the posterior the resistance, when, under these circumstances, the foot is flexed. In the various forms of talipes where the equinus element exists, the first of these mechanical effects becomes exaggerated through the permanent contraction of the post-tibial muscles, and the latter ceases to be operative for obvious reasons. In order to again place the foot in its normal position, we are obliged to use some form of apparatus which will, in a mechanical sense, produce the same effect as the anterior tibial muscles, and which will also act in such a direction as to remove (with the assistance of the knife, if necessary) the resistance met with in the contracted and altered state of the opposing tissues.

In every form of "club-foot shoe" for the treatment of equino-varus or equino-valgus which I have thus far examined, the artificial power used to overcome the resistance, whether it lies in the tendo Achillis, the plantar fascia, or elsewhere, has been, in some important particulars, misapplied, with the result of making the mechanical treatment of talipes, whether following tenotomy or not, not only tedious, but in very many instances unsatisfactory.

If we call to mind the ordinary forms of apparatus, it will be remembered that the essential parts comprise one or two uprights running parallel with the long axis of the leg, and surmounted by a band passing around the calf; a joint corresponding with the ankle; a "heel-strap" securing the heel in a "cup;" and a foot-plate, with or without a joint or hinge, corresponding with the medio-tarsal articulation. This apparatus, modified from Scarpa's shoe, is made the medium of the application of a certain degree of force, which is intended to act, as nearly as may be, in place of the anterior tibial or lateral muscles.

In no other part of the human body is the substitution of a purely mechanical force for the power generated by the contraction of muscular fibre—a very difficult proceeding in any event—more easily applied than at the foot. It seems very easy to construct an apparatus with a joint to correspond with the tibio-astragaloid articulation, and to make this joint the centre of an artificial movement imparted to the anterior part of the foot through the medium of the foot-plate. But let us see what happens when we attempt to do this with the ordinary forms of apparatus. The centre of motion, so far as the equinus position is concerned, is at the tibio-astragaloid articulation. The resistance lies in the post-tibial muscles, and the power is applied in front to the tarsus and metatarsus—the object being simply to flex the foot and bring down the heel. As the anterior part of the foot rotates upon its artificial ankle-joint centre,—or, to put it in other words, as we crowd the os calcis into the heel-cup, and attempt to flex the foot in very much the same manner we would shut the half-opened blade of a knife,—the heel, unless restrained, slips forward. The attempt is made to control this movement by tying the heel down to the foot-plate and in the heel-cup, with the heel-strap. If, after this heel-strap (the analogue of the anterior annular ligament) is tied, a considerable pressure be applied in the direction of flexion (even, in many cases, after tenotomy), the further tendency of the heel (being restrained in front by the heel-strap) is to slip upward and backward away from this artificial annular ligament, ultimately, in many cases, resting on the top of the heel-plate, which forms the cup. When this occurs, all control over the foot is lost, as it turns toward that side upon which the contractions exist. One of the direct effects of mechanical flexion, as applied in the customary forms of apparatus, to overcome either a post-tibial or a plantar contraction, is to crowd the tarsal bones together.

The foot-plate rotates around an axis, the centre of which is the "ankle-joint" of the apparatus. The point at which the retaining force and counter-pressure (under the heel-strap), which holds the foot in the apparatus, is made, must also rotate around the pivotal point. Upon this heel-strap we must rely principally for the means of retaining the foot in the apparatus, and it supplies the only important means for regulating the relation of the anatomical to the artificial centre. If the foot, as a whole, could be secured perfectly in the apparatus, and be made, as we apply a gradually increasing force, to mechanically follow the direction imparted to it by the artificial mechanism, the trouble would be reduced to the minimum. Our artificial would then correspond to the human mechanism. But, principally through the causes referred to, the centre of rotation in the foot and in the apparatus become changed in their relations to each other, and all the pressure exerted under these circumstances is productive of injury. As pointed out, the tarsal bones become crowded together, the heel slips beyond the control of the apparatus, exposed points are apt to become excoriated, and the result, while sufficient force has been employed, though misapplied, is very discouraging in very many instances.

For the purpose of description, I have divided the tarsal contractions into two varieties, viz., the lateral and the antero-posterior. The former are, as a rule, easily overcome, and will be referred to more particularly later on. The latter present mechanical difficulties that are no easier of solution than are the post-tibial. It has been the object in the treatment of deformities of this class to create a lever where the long arm, anterior to the medio-tarsal articulation, will act upon this joint in such a way as to overcome a resistance at the base of the arch. This resistance is something more than a simple contraction of the plantar fascia, the division of which not unfrequently eliminates only one element of the resistance, and that the least important. But, aside from this consideration and the limited field that exists for the application of any adequate force, the trouble here, as in the post-tibial contractions, lies in the difficulty of obtaining an artificial fulcrum which can be made to correspond and to act with that which exists in the tarsus. In addition to this, the strength and distribution of the normal tissues supporting the tarsal arch, and the rarity of traumatic displacements of the bones of the tarsus, attest the many difficulties in the

way of overcoming the resistance met with, especially in the antero-posterior deformities of this class, by the attempts at leverage which we see illustrated in the various medio-tarsal joints and hinges, and the elastic tubing so popular at the present time. In the generally accepted apparatus, the heel-strap, or something which corresponds to it, is made, mechanically speaking, the means of fixing the foot. The artificial mechanical power, acting through the medio-tarsal joint, meets with a resistance that cannot, in the majority of instances, be overcome by manual force. If this resistance has not been almost entirely removed by the knife (and these cases are very exceptional), an almost ineffectual crowding of some of the tarsal bones results without a corresponding effect upon the resisting tissues. Sooner or later, in many cases, if this plan of treatment be persisted in, tender and excoriated points interfere with the further progress of the case. These unpleasant sequelæ and the mechanical difficulties I have called attention to, have made subcutaneous sections of the tarsal contractions unpopular, and I know several surgeons whose experience has been very unsatisfactory with "plantar fascia operations."

These facts, and others which I need not mention, have led me, after testing various methods of treatment (including the plaster-of-Paris bandage), to study particularly the mechanical problems involved in the treatment of talipes.

While engaged in a series of experiments I was confronted by an exceptionally difficult case of equino-varus, depending on an anterior myelitis, occurring in my service at the Orthopædic Hospital. The patient (R. W., aged 5) had on a previous occasion been an inmate of the hospital, and I had succeeded, after division of the tendo Achillis, and the usual mechanical difficulties, in overcoming the deformity. After an absence of several months, during which time the mechanical treatment of the foot was almost wholly neglected, a relapse occurred, and the patient was again brought to the hospital, with the heel in its old position—that is, the gastrocnemius had shortened fully three-fourths of an inch. I advised a second operation which the parents positively declined. The history of my attempts to bring the heel down without tenotomy, prior to the use of the instrument I shall shortly describe, would be to rehearse my comments on the mechanical defects of the generally accepted forms of apparatus. After several disappointing failures it became apparent to me that if I could apply a traction force to the anterior part of the foot, that while I would prevent the crowding of the tarsus, I would also make the resisting tissues the counter-extension, and hold the foot so that the heel could not slip from the heel-strap. In carrying out the idea, I applied extension to the anterior part of the foot after the manner employed in the treatment of diseased articulations. The effect of this procedure was a surprisingly rapid yielding of the contracted tissues, both post-tibial and plantar, though the latter was slight. The foot was brought to its normal position in a few weeks. Extension was maintained, however, for a considerable time (two or three months), and the foot was gradually flexed until its anterior part was raised to the desired extent. All support has been removed now for over two months, and no relapse has occurred.

Master E. R——, aged 8, presented a case of congenital talipes equino-varus. The post-tibial resistance had been removed by operative and mechanical measures, but a very considerable amount of antero-posterior tarsal contraction remained, even after a previous subcutaneous section of the plantar fascia.

On June 8, 1878, I assisted Dr. Henry B. Sands at the second operation on the tarsal contraction, and after the section was made, applied my club-foot extension apparatus, with a view to thoroughly stretch the tarsal tissues, Dr. Sands kindly placing the patient under my care. On the 1st of July the deformity was practically overcome, and the foot had gained three-eighths of an inch in length. About this latter date the patient went into the country, and I did not see him again until Oct. 15th—traction having been maintained by the parents until a short time previous to their return to town. The boy had improved so rapidly that the father brought him to me without any support upon the foot, and the patient walked naturally and without any irregularity of gait.

On May 11, 1878, I saw in consultation with Dr. B. D. Carpenter, of South Bergen, N. J., a baby (H. Y——), about four weeks old, who presented a case of congenital talipes equino-varus. It was an average case, and one where tenotomy would have been unhesitatingly performed by the majority of surgeons. I applied, however, one of the tarsal splints figured in engravings Nos. 4 and 5, and advised that several weeks should be occupied in overcoming the lateral tarsal contractions. The hot weather intervening, nothing was done, except to use the lateral splint, until October 22d, when the lateral deformity being wholly overcome, I applied, assisted by Dr. Carpenter, one of my club-foot extension splints. With some misgivings, I advised that tenotomy be deferred until the extension splint should have a fair trial. In this opinion Dr. Carpenter hesitatingly concurred. At that time we both expected that tenotomy would be necessary at an early day.

On November 8th, sixteen days after the apparatus was applied, Dr. Carpenter and I again met and examined the foot, Dr. Carpenter during the interval having seen the case daily. No excoriation had occurred, and the equinus position had been wholly overcome. As much had been accomplished in this case in two weeks, with the extension shoe alone, as could be expected under the most favorable circumstances with tenotomy. Several other cases, both of post-tibial and plantar contractions, have been attended with equally good results by the use of this apparatus, with and without tenotomy. The success of the application of traction to the tarsus, in overcoming the deformities of talipes—which, so far as I know, is entirely new—has so greatly exceeded my anticipations, that I am led to hope that the use of this principle, after the manner about to be described, may make the necessity of tenotomy much less frequent.

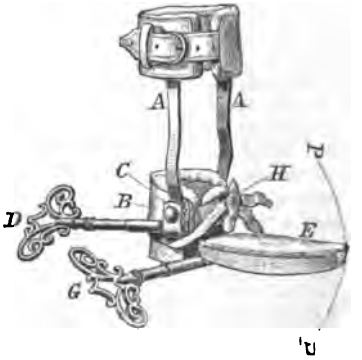

FIG. 1.

The club-foot extension apparatus (Fig. 1) consists of the ordinary uprights, *A*, *A*, fastened to the con-

ventional heel-piece, *B*, by a plain joint on one side, and an endless screw, *C*, on the other. This screw, *C*, allows us, by using the key, *D*, to place the foot-piece of the apparatus, as a whole, in any antero-posterior position we choose, and to alter it at will, either before or after application to the foot. The dotted line, *P*, *P*, is supposed to represent the arc of a circle, the centre of which is the screw, *C*. That part of the foot-piece, *E*, which corresponds with the tarsus and metatarsus, is joined by a common extension rod, *F* (shown in Fig. 2), to the portion which lies under the os calcis. With the key, *G*, we are enabled to extend the anterior part of the foot-piece, *E*,

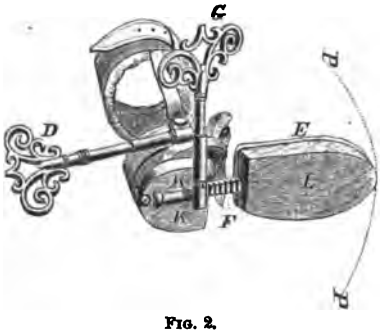

FIG. 2.

at pleasure. Fig. 2 shows the apparatus lying on its side, with a full view of the under surface of the foot-piece, *E*, and the extension rod, *F*. At *K*, *K*, is a leather, or rubber heel, built up on either side of the extension cylinder, and *L* represents a wooden sole, which is elevated to a height corresponding with the rubber heel. So far as this apparatus is concerned, I may say that it presents no novelty, save the extension rod, and the modifications which this addition to the apparatus makes necessary.

To apply this instrument, we first, by means of the key, *D*, place the foot-piece in a position that will exactly correspond with the antero-posterior position of the foot (whether tenotomy has been performed or not). We then secure the heel by tying the heel-strap, *H*, as represented in figure No. 3. We then bind the foot, anterior to the medio-tarsal joint, to the extension part of the foot-piece, *E*, by means of adhesive

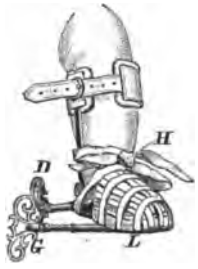

FIG. 3.

plaster (*vide* Fig. 3). We first apply four or five strips to the plantar integument, which are reversed as they pass over the end of the foot-piece, and are then fastened to the under part (wooden) of the foot-plate. Five or six strips are now passed longitudinally over the toes, and underneath, where they are also secured. Transverse pieces are then passed around the tarsus and metatarsus—also underneath the foot-plate—and secured at convenient points. (The plantar strips are not shown in the engraving, and the artist has placed key *G* too far forward). A bandage is then applied to protect the adhesive plaster. The key, *D*, is now used to flex the foot, in overcoming to the desired extent the tendo Achillis resistance. When this shall have been accomplished it will be found, as in all similar apparatus where the artificial flexion alone is depended on to overcome the post-tibial resistance, that the posterior aspect of the heel is pressing against the heel-plate. In varus the cuboid, in valgus the scaphoid bone, becomes uselessly crowded, and in a direction which does little or no good. All the tarsal bones are also crowded together by the force which is acting in the arc of a circle the centre of which is the ankle-joint. But now, a turn or two of the key, *G*, brings the foot under control. If the tarsal deformity be only slight, the pressure at the cuboid or scaphoid is modified; the compression of the tarsus is relieved; the plantar fascia, the plantar muscles, and the tarsal ligaments are actually stretched; besides which, the os calcis is placed under restraint, and in this way the traction force passes through the tarsus directly to the tendo Achillis. The mechanical counter-extension, of course, is at the heel-strap, *H*. It simply retains the foot in a position that allows a certain amount of force to be expended on the contracted tissues. The greater pressure under the heel-strap, however, is exerted by flexing the foot with key *D*, rather than by using the extension at *F*. Particular pains, however, should be taken not to make these combined forces too great. I have seen very extensive excoriations produced by the plaster-of-Paris, and also by the customary methods of treatment. In some cases these unfortunate complications have interfered with active treatment for weeks. I have not, however, in the twelve cases I have treated by this new method, met with excoriations that interfered with treatment in any way. As a matter of precaution I always place several thicknesses of sheet-lint, or a thick layer of absorbent cotton (this latter makes an excellent elastic pad) under the heel-strap and at the sides of the heel-cup. If a very considerable extension is necessary, I pass an additional padded strap over the lower end of the tibia, passing the tapes attached back of the two uprights, securing them in front over the pad. It is a matter of surprise to me how well, with a little care, pressure is tolerated at this exposed point under the heel-strap, and also how little traction, applied in the manner indicated, through the tarsus, is necessary to accomplish the object. In order to inspect the part exposed to pressure without removing the adhesive plaster and the anterior part of the foot-piece, it is only necessary to loosen the heel-strap and turn key *G*, until the extension rod, *F*, drops from the cylinder, when the entire posterior part of the apparatus may be easily removed. The part under the heel-pad should be inspected *once a day*. Thus far in my experience the adhesive strips need renewing every three to seven days. The plaster strips are important. I have used Wyeth's twilled adhesive plaster for this purpose, and prefer it to any other. An important point may be mentioned here: it is always well to overcome almost wholly the lateral malposition of the tarsus before applying direct traction. Time will be saved—and some annoyance also—if this rule be uniformly followed.

The lateral part* of the tarsal malposition in varus depends principally upon the contraction of the inner portion of the plantar fascia, the inner and upper

* By this I mean especially those malpositions which depend upon rotation of the foot upon a vertical or antero-posterior axis, or both.

fibres of the abductor pollicis pedis, assisted in some cases by the tibialis anticus and posticus. I have deemed it best as a matter of experience not to adopt the club-foot extension apparatus to the purely lateral deformity, as mentioned before. It is, ordinarily, and especially in infants, a very easy matter to rectify this by any lateral support of gutta-percha, tin, or other flexible material. In obstinate cases it is well to make subcutaneous sections to save time. I have found a very useful lateral splint in a modification of

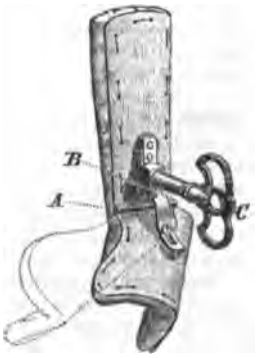

FIG. 4.

Taylor's "ankle-support," which is represented in Fig. 4. My modification consists in the substitution of the *lateral* hinge, *A*, and the endless screw, *B*, for the antero-posterior joint. The dotted lines show the movement acquired by using the key, *C*. This modification enables us to apply the apparatus *accurately* to the *extremes* of varus (or valgus), and to gradually, by means of the key, *C*, turn the foot to the desired extent. It is well, as pointed out by Dr. W. J. Little, to convert the varus into a valgoid position before removing any lateral apparatus—and Mr. Adams demonstrates the advisability of using the os calcis and the contracted tendo Achillis as a fixed point upon which to extend the tarsus. I have availed myself, in using this lateral splint, of both of these suggestions, and find them very useful and practical.

This splint is applied, as represented in Fig. 5, to that side of the foot toward which the deformity looks. It should be secured by a bandage (the bandage is omitted in the engraving, and two strips of adhesive plaster, *Q*, *Q*, are substituted, so that the application of the splint may be more easily shown).

FIG. 5.

The counter-extension surface being large, and the resistance generally slight, the pressure may be very gradually applied. The foot can, under ordinary circumstances, be changed from the varus into a valgus position without any pain whatever. Experience has taught me, however, that after the purely lateral tendency has been overcome, a marked degree of antero-posterior tarsal deformity still exists in the central and outer portions of the fascia and the muscles which underlie them. The advantages which direct traction gives in overcoming this—the most difficult part of the tarsal resistance—has been already commented on. I may add, in closing, that I have already used this club-foot extension apparatus in inflammation of the tarsal- and ankle-joints with advantage.

31 WEST THIRTY-SIXTH STREET, N. Y.

A CASE OF ACUTE RHEUMATISM WITH MENINGITIS.

BY J. L. HICKS, M.D.,

FLUSHING, L. I.

ON the 10th of July I was asked to see Mr. C. P., a gentleman 72 years of age, of very robust build, thick neck, florid, and generally full-blooded, and having a very decided rheumatic history. He was sitting at dinner, and complained of a wearying, aching pain in the right arm, of some two or three days' duration. Upon inquiry and examination I satisfied myself that the pain was due to rheumatism of the shoulder-joint, which was very tender and lame. A few days after I was summoned to see him again, when I found the whole arm extremely painful, tender, and immovable. On making a more careful examination of the part, I was surprised to find unmistakable dislocation of the shoulder-joint, of which he gave me the following history:

About five years ago, while living at Westfield, Conn., he had a fall, and the head of the humerus was thrown out. Two eminent surgeons of Hartford came to his assistance, and effectually reduced the luxation, the head of the bone going into its place with a decided click, and the limb was properly secured for rest. Some swelling, however, remained about the joint, and his friends prevailed upon him to consult a well-known "bone-setter" of that neighborhood, who informed him that the joint was dislocated, and invited him to take up his residence at his institution for treatment, which consisted of daily manipulations and movements, the arm being raised each day more and more nearly to a horizontal position, and swept about in various directions, all of which was very painful, and not apparently accompanied by any progress in the direction of cure. At the end of a month he was informed that nothing more could be done, and that the head of the bone could not be kept in place, as a "flange" in the joint had been broken off. He subsequently regained some use of the arm, though its scope of motion was quite limited.

The rheumatism, which began at the shoulder-joint, extended down the arm to the hand; then the right knee-joint became involved, and the disease travelled down to the ankle and foot of the same side; next the left ankle became affected; then the knee, and then the joints of the left arm. During this time, which extended over a period of three weeks, his sufferings were very severe; and it seemed as though remedies of whatever kind, anti-rheumatic (including salicylates, alkalies, lemon-juice, etc., etc.), and narcotics, in so far as they could be safely used, produced very little effect, and as might be expected, in a man of his temperament, under such circumstances, he was choleric and excitable in a very high degree.

No evidence of cardiac implication presented itself, although expected and closely watched for; but at the end of the second week he began to be deliri-

ous at night, and true sleep became more and more difficult to obtain. Bromides in large doses, also chloral, seemed to be totally inefficient. Hypodermic injections of morphia I felt constrained to abandon, as the cerebral symptoms seemed to become more pronounced under their use; while the usual local antiphlogistic measures, though energetically used, seemed to accomplish little or nothing, and excitement passed into delirium, which became mania, whose ominous import was soon confirmed by somnolence merging into coma, which at the end of about forty-eight hours terminated in death on the 8th of August.

The general impression derived from observation of this patient was that of a system saturated and overwhelmed by the rheumatic poison (whatever that may be), and against which no remedies appeared to exert any neutralizing power. Mr. P. had suffered several previous attacks of rheumatism, in one of which I attended him about a year and a half ago, when salicylate of soda was used with very happy effect, and the attack, though severe in its onset, was undoubtedly aborted. An attack which occurred in Connecticut some four years ago was, I am informed, extremely severe, and associated with a delirium, which obliterated from his mind the events of some three weeks of his illness.

The range of temperature was not notably high until the last three days of life; beginning at the outset with a daily fluctuation of from 99° to 101°, and gradually rising to 102°, evening, in the second week, and reaching 103°, evening, for the first time, on the 6th, which was not surpassed until eight hours before death, when the temperature reached 104½°.

The urine was examined a number of times, chemically and microscopically, but nothing was found to indicate kidney disease. Its quantity, though not accurately measured, I judged from information not to exceed the normal, and I could not at any time find albumen, nor anything of special significance, save a pretty large proportion of lithates, as might be expected.

There was neither nausea nor vomiting at any time during the attack. The bowels were at times considerably distended with wind, and for the most part rather inclining to be free, and only during the last two days of life were they confined at all since the beginning of his illness, when on two or three occasions he was assisted by laxatives.

Muscular movements of a spasmodic character occurred during the last day only. They were confined to the right arm, and in a less degree to the leg, and were associated with occasional tremor. No contractions of facial muscles were observed.

The autopsy, twenty-four hours after death, was, it is to be regretted, limited to the head, and developed the following facts: the head was rather large, measuring twenty-three inches in circumference, and the brain weighed a little over fifty ounces. On removing the calvarium, very decided evidence of meningeal inflammation at once presented itself. The superficial vessels were very full, and showed in strong relief against the whitish linear deposits of lymph in which they seemed at places to be imbedded. The layers of the arachnoid were adherent at several places along the line and on both sides of the superior longitudinal sinus, and patches of lymph were scattered at various points over the convexity of the brain surface. Underneath the membranes, and lifting them up from the brain, was a very considerable effusion of fluid and lymph, filling the meshes of the pia mater and extending between the convolutions. This effusion was most marked upon the summit, though it existed in a less degree at the base, and a very considerable effusion of both fluid and plastic material was found in the fissure of Sylvius. At the base of the brain the vessels seemed less distended with blood than elsewhere. No embolism or plugging of the smaller vessels could be found anywhere by the coarse method of examination pursued. The surface of the brain had a pinkish, cream-colored tint, and seemed rather firmer than usual, and on section the brain-substance exhibited numerous sharply-defined puncta. Very little fluid was found in the ventricles, but the choroid plexus presented a distended and infiltrated appearance.

I publish this case for the purpose of adding something to the very scanty literature of cerebral rheumatism. The unsettled state of opinion existing as to the pathology of cerebral complications of acute rheumatism is doubtless due to a lack of uniformity in the anatomical conditions observed after death. A very elaborate and interesting paper upon this subject, by Dr. Da Costa,* in which twelve cases are reported, goes to demonstrate this conclusion very forcibly. Of these twelve cases, eight ended fatally. No examination of the brain was made in three of the eight. Bright's disease existed in two, and possibly in one other, in which no autopsy was made, but in which albuminuria, but no casts were found. Pericarditis and endo-pericarditis occurred in two cases. In the others, no cardiac lesions of material importance were discovered. Plugging of the finer brain-vessels was found in one case, and in the opinion of the author in another that recovered, though he admits the possibility of true meningitis having existed in this instance. In case eight, in which it is to be regretted no examination was made, there were symptoms which pointed very decidedly to meningitis, or at least to localized intracranial pressure. Be that as it may, in *none* of the autopsies was true meningitis met with.

The rarity of this complication is illustrated by the fact that only five or six lines are devoted to the subject by Senator in his article on acute rheumatism in "Ziemssen's Cyclopedia," merely stating two or three authors who have reported such cases. Niemeyer mentions the possibility of actual meningitis in acute rheumatism, while Hammond has met with one case, the particulars of which, however, are not given. Other authorities are almost equally meagre in their accounts of this disease; and from the testimony that is presented, it is impossible to avoid the conclusion, that of the cerebral complications of acute rheumatism true meningitis is a rare event.

The nervous disturbances appear to depend upon a considerable variety of contingencies: heart disease, and the disturbances of circulation thereby produced; embolism and plugging of small cerebral arteries; uræmia, from associated kidney-degeneration; blood-degeneration in connection with protracted high temperature, and not improbably blood-poisoning, due to the presence of the special *materies morbi* of the disease. Whatever may be the facts in individual cases, the history of cerebral rheumatism exhibits a type of disease of exceedingly grave character, and in which therapeutic measures, of whatever kind, seem of little avail, and we are doubtless justified in inferring that we have not merely rheumatism to deal with, but something existing collaterally or anteriorly to the rheumatism, and upon which it is engrafted.

* Art. Cerebral Rheumatism, *Am. Jour. Med. Science*, January, 1875.

Finally, the question presents itself—are we justified in regarding the meningeal inflammation which occasionally occurs in the course of acute rheumatism as a *rheumatic meningitis* proper, in view of the fact that a form of meningitis, closely allied by its anatomical characters and its clinical history to the so-called rheumatic form, occurs not unfrequently in the course of other grave diseases, particularly the essential fevers, Bright's disease, cirrhosis, tubercular phthisis—in short, in cachectic states of the system generally? This form, called by some authorities subacute, or secondary meningitis, appears to differ in no very essential particulars from that which occurs under the circumstances just considered. It would seem that before fixing upon the term "rheumatic meningitis," the metastatic character of the disease should be definitely proven, and its essential rheumatic origin clearly evident; otherwise, by parity of reasoning, we are bound to accept the terms, "uræmia meningitis," typhus, and typhoid meningitis, etc. Refinements and expansion of nomenclature must inevitably take place in correspondence with anatomical and pathological research, and it is surely wise, in view of the confusion already existing in nosology, to avoid and eliminate all terms not founded upon strictly scientific distinctions.

PRACTICAL OBSERVATIONS MADE ON TWO PARALLEL CASES OF PYOTHORAX TREATED BY INCISION, DRAINAGE, AND IRRIGATION.

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To deal intelligently with the question of the treatment of empyema, it is necessary to bear in mind that as soon as a pleuritic effusion acquires a purulent character, it may be safely looked upon as a simple abscess, and be treated as such by immediate incision with subsequent thorough drainage.

By contemplating the anatomical changes wrought by this disorder in the condition of the organs in question, we shall be led logically to the measures required to alleviate, or eventually to remove the disturbance.

First, the effusion will encroach upon the space normally allotted to the lung; hence compression, loss of functional capacity, with its immediate or remoter results, as dyspnœa and change of structure.

Secondly, we see a large hermetically occluded abscess-cavity, its walls furnished with an amply developed system of lymphatic ducts and stomata, all of them portals for the resorption of the fever-generating matter contained in the pus which fills the pleural sac under a high endothoracic pressure. This causes high and constant fever, with consequent hectic emaciation.

Thirdly, pseudomembranes lining the lung surface and parietes will soon form. In the course of a few months they will become tough and rigid, and the lung thus encapsuled, is doomed to structural degeneration, even if the original cause of compression, *i.e.*, the effusion, be removed. It is obvious that it would be impossible to draw a sharp boundary line, indicating where and when this functional diminution of the lung does definitely take place; but it will suffice for practical purposes to know that every additional day during which the consolidation of the false membranes can progress undisturbed, will bring the patient to that grave emergency, and will, after operation, proportionately retard the process of healing.

In its present state it would be idle to discuss the question whether or no an empyema ought to be operated on. The only point to be decided on is: *When* should the surgeon's knife interfere?

There are, and always will be, timid practitioners, who even in critical cases will delay—will rely rather on nature's healing powers than face the responsibility of applying the knife to a desperate case. Thus the favorable moment is lost, and the patient either succumbs, or, if operated on, retains, perhaps at the price of a lifelong thoracic fistula, a doubtful existence, the danger of pulmonary phthisis hanging above his head like a doom.

Accumulated historical evidence shows that a spontaneous healing of empyema is an extremely rare thing; that even in cases where spontaneous evacuation happened to take place, through a favorable locality, and in a fortunate manner, the patient ultimately succumbed to the fever caused by decomposition of stagnant pus. Generally, the spontaneous opening is too small, and establishes itself without reference to efficient drainage; the stagnant secretions, coming in contact with air through the bronchi or otherwise, will putrefy, and a fatal septic fever will soon finish the scene.

In those instances where the tardy practitioner, urged by the constant emaciating fever, and the knowledge of its cause, finally concludes to drain the source of the patient's sufferings, the operation will not yield as satisfactory a result, "quo ad valetudinem," as when employed at an early stage of the disturbance. The compressed lung has become sealed up in its pseudomembranous coating and cannot expand easily; the two laminæ of the pleura cannot come into renewed contact, and the cavity between collapsed lung and parietes cannot diminish by gradual cohesion of the walls. The result is a permanent thoracic fistula, and the host of evils possibly coming from it.

On the other hand a watchful practitioner, warned by the high and constant fever, will soon ascertain, by the aid of a fine aspirator needle, the presence of pus in the pleural sac. After this he will not hesitate to incise the abscess, to irrigate and drain the cavity, and accordingly will meet with the most gratifying results. The conditions met with during an early stage of the trouble are very favorable for a restitution *ad integrum;* the yielding pseudomembranes will easily give way before the expanding lung; the cavity by a gradual and progressive adhesion of the pleura, visceral and parietal, will be closed up definitely in a comparatively short time.

It will be seen from the history of the two cases following, that these theoretical propositions are really borne out by practical experience:

Case I.—February 17, 1878, I saw, by request of Dr. A. Frech, J. A——, an anæmic boy of eight years, who had been suffering from pleuritis for a fortnight. Physical examination divulged the presence of an effusion reaching up in front to the second rib of the right side; dyspnœa and hectic emaciating fever made the boy's condition very pitiable. Internal medication having had no noticeable effect upon the malady, paracentesis was at once decided upon. An india-rubber tube was attached to a grooved needle; both were filled with water; the free end of the tube was immersed, and the needle was thrust into the pleural sac through the fifth intercostal space on a line with the axilla. Twelve ounces of a straw-colored, fibrinous, slightly puriform liquid were voided. Entrance of air through the needle being out of question, the full percussion-sound, now to be heard all over the extent

of the right lung, was accepted as a sign of a prompt expansion of the formerly compressed organ. Dyspnœa and the cyanotic hue of the integuments were at once apparently diminished, and the needle was thereupon withdrawn. The patient's condition was much improved for the three weeks following; he ate and slept well; his temperature, which previous to the tapping touched 105° F. nightly, never rose above 102° F., and the effusion showing no tendency to increase, hopes were entertained that resorption would soon follow. Unavoidable circumstances prevented me from seeing the patient until May 4, when his condition was such as to call for immediate action. Pus having escaped in the track of the punctures, an abscess formed underneath the serratus anticus muscle. This abscess was incised, but continued to discharge very large quantities, first of kind, later of septic pus. The child was almost a skeleton, his pleura filled with fetid pus up to the third rib. With the assistance of Dr. L. Straus, the boy was anæsthetized, whereupon an incision was made through the fifth intercostal space into the pleura, and a large quantity of thick, fetid pus escaped. A soft rubber drainage-tube being inserted into the wound, a stream of a lukewarm one per cent. solution of carbolic acid was turned into the cavity. When the injected fluid ceased to return in a turbid state, the end of the drainage tube was trimmed short and transfixed with a pin. The wound was covered with a large cake of oakum. Irrigation was thus employed twice daily, and in the course of a few days the change in the boy's condition became agreeably apparent. The temperature fell and remained normal. the purulent discharge, which was at first copious, diminished considerably, the patient's appetite improved, he slept well, and by May 17th had gained flesh perceptibly, and spent most of his time out of bed.

June 15th.—Fistula of abscess under serratus closed; the boy is fat and strong, and constantly out of doors; secretion serous and very scarce. A thinner drainage tube was inserted. Daily gymnastic exercises, and the use of a laterally inclined seat have greatly diminished lateral curvature.

September 23d.—Difficulty being experienced in retaining the elastic tube, it was replaced by a thin strand of horsehair, which answered excellently all purposes of drainage. To ascertain the capacity of the remaining empty space, a very slender silver catheter of one-eighth of an inch in diameter, is introduced from time to time, and thus it is ascertained that the cavity is slowly but steadily diminishing.

October 5th.—After inserting the catheter, not one drop of fluid escapes. The cavity having filled up, the closing of the remaining fistula is accelerated by a few injections of a five per cent. solution of chloride of zinc, and is accomplished.

October 30th.—On careful examination, the facts regarding the patient's present condition are as follows:

Minimal lateral curvature in erect attitude. The right side of thorax, formerly flat and anteriorly sunk in, is rounded out to its normal outline, presenting no difference from the left side. Respiratory excursions of ribs absolutely identical on both sides. Percussion and auscultation give likewise proof of a perfect restoration as regards both dimensions and function of right lung. General condition florid and vigorous.

Case II.—At the request of Dr. W. Balser, L.P——, a delicately shaped girl of seven, was seen by me at Centreville, N. J., a fortnight after the commencement of an attack of pleurisy. The case presented the most urgent symptoms of an unusually large effusion in the right pleural sac, together with a strong probability of its purulent character. The temperature rose every evening to 105° F. and above; percussion in the whole extent of right side of thorax absolutely dull, and no respiratory sounds to be heard, except some bronchial noise, apparently transmitted from the trachea. Patient very dyspnœic, restless, and emaciated. A good-sized pointed canula being inserted into the sixth interspace, thirty-six ounces of a sero-purulent fluid were drawn off by the aid of an aspirator. Towards its close the operation elicited frequent coughing, and the dulness changed over the whole extent of the right lung into a loud, full, and somewhat tympanitic sound. On auscultation, vesicular breathing accompanied by a few râles was audible. Breathing, pulse, and color of integuments having visibly improved, we left the patient free from the imminent danger of asphyxia. The following day, the first time since her illness, she ate with relish. Temperature in the evening 101¼° F. This did not last long, however. Gradually all the old symptoms returned, and the dyspnœa, fever, and wretched general condition of the little patient soon compelled us to seek for a more radical relief than aspiration could afford. Accordingly, April 4th, with the aid of Dr. Balser, incision was performed in the sixth interspace of axillary line. An elastic tube was placed in the opening, and the cavity was well washed out by a stream of a half per cent. solution of carbolic acid. By April 11th we had a temperature of 102° F. in the evening, a better appetite, and good night's rest. April 20th.—With two daily irrigations, secretion had considerably diminished, wherefore one irrigation per diem was ordered; fine appetite; the child spent most of the time running about the rooms, and gained a good deal in flesh and color. To counteract the slight lateral curvature, gymnastic exercises on a small trapeze were instituted with best effects. June 1st.—Secretion having ceased, the drainage-tube was removed. June 14th.—Fistula firmly healed.

In critically examining the points presented by the two foregoing cases, we find that they afford good material for a parallel. The conditions offered by both subjects are in the essentials identical, and therefore the conclusions deduced somewhat approach the stringency of an experimental proof. Both patients are slight anæmic children, of nearly the same age; in both instances the seat of the disturbance is the right pleural cavity: the nature of the mischief is the same in either case: a sero-purulent effusion. Both cases are and remain throughout free from complications, and on both patients the same methods of treatment are employed. As regards therapy, the only difference is to be found in the different lengths of time elapsed between the puncture and incision respectively. Both cases were punctured a fortnight after the invasion of the illness; the time, however, that elapsed between puncture and incision is 76 days in Case I., 16 days in Case II., and the conspicuous difference in the results seems to correspond to, and wholly depend upon, this circumstance. In the table, page 408, will be found the numerical expression of the difference in the results as regards duration.

One glance will show that by the delay of 60 days the patient concerned, *first* spent 60 days of illness without the slightest prospect of improving; *secondly*, that the conditions for his recovery, by the time he was operated on, were greatly deteriorated, the pseudo-membranes having become more dense and unyielding. Accordingly we see that, after incision, it took in Case I., 179 days to achieve what in Case II. was accomplished easily in 53 days; while Case II. was restored in less than 3 months, Case I. had to be irri-

gated and bandaged for 9 months—a difference of exactly a half year.

	Time Elapsed:			
	Between invasion and puncture.	Between puncture and incision.	Between incision and cure.	Total.
Case I.....	14	76	179	269
Case II.....	14	16	53	83
	—	—	—	—
Difference..	..	60	126	186

Then again, it will be observed that in Case II. incision was practised 30 days, in Case II. 90 days after the commencement of the illness; the proportion is as 1 : 3. Summing up the numbers representing the entire duration of each case, we find for Case II. 83 days, that is, somewhat less than 3 months; for Case I., 269 days, that is, almost 9 months; and it is curious to observe that here also the figures expressing the proportion are as 1 : 3. Thus we see that in our two cases the length of time required for recovery is in direct proportion to the length of time that elapsed between the beginning of the illness and the operation. And if we remember that the initial symptoms in Case II. were decidedly more urgent than in Case I., that both the compression of the lung and the accompanying disturbances were graver there, our argument in favor of the possibly earliest operation for empyema will be still more strengthened.

The technical details of the operation are so simple that every practitioner possessing a moderate amount of self-reliance and dexterity can safely undertake it. An incision running parallel with the rib, one and a half inches long, will divide the skin of the interspace (third to sixth), chosen according to circumstances. The serratus is next divided, then the fascia covering the external intercostal muscle is split near the upper edge of the lower rib, whereupon the knife can be laid aside, the intervening tissues being separated by the aid of two forceps and a director. A slight exertion will suffice for entering the pleura, which occurrence will manifest itself by the copious gushing forth of pus. Now a probe-pointed knife passed into the opening will easily enlarge it sufficiently for receiving a good-sized india-rubber tube, which can be prevented from slipping into the cavity by transfixing its end with a pin. An irrigator can be had or can be improvised everywhere; carbolic acid is likewise ubiquitous, and, after lapse of the first critical week, the most unintelligent parent can be taught to use the irrigator successfully. It is important to insure perfect drainage, even more so than to irrigate often. Avoiding stagnation, the secretion will soon become sparse and serous, and the number of daily or weekly irrigations may be diminished accordingly. For the first dressings, oakum or any other resorbent antiseptic material will answer, care being taken, however, to place between the skin and the oakum a piece of oil-silk, to prevent irritation. As soon as the general condition permits, gymnastics ought to be assiduously encouraged; and herein parents can do more than the physician. Gymnastics will exercise a very beneficial effect on the general nutrition, as well as on the correction of the inevitable scoliosis.

In summing up the conclusions derived from the facts presented in the foregoing statement, we may lay down the following general principles concerning the treatment of empyema:

In every instance of pleuritic effusion, where during the course and after the lapse of the second week, no abatement of the fever and no decrease of the volume of the exudation can be ascertained, the suspicion of a purulent process will be very strong. A probatory puncture will or will not establish the fact of the presence of pus. If thick pus be found, incision and drainage ought to follow immediately. If the effusion be serous or slightly purulent, its removal by aspiration will certainly improve the momentary condition of the patient, besides affording better chances for the resorption of the remainder of the exudation. If the fluid accumulate, and the fever be renewed again, incision ought to be practised without delay.

Symptomatically, our operation admirably fulfils all that can be desired. It disposes of imminent asphyxia, insures, by the aid of drainage, complete apyrexia, and, early resorted to, offers most favorable conditions for a restitution to a *status quo ante*. And, considering the relative certainty of success following the operation, then the irreparable damage surely to accrue from long delay, finally the facility of methods to be employed in operation and after-treatment, it seems almost culpable in the physician of modern attainments not to throw the whole weight of his authority into the scales for overwhelming the patient's or his relatives' natural dread of a bloody operation.

Hoping that the perusal of this small contribution will induce some colleagues to interfere early in cases of empyema, I wish to state my beleif that, by resorting to the operation, the life and health of many a sufferer may be successfully saved.

IODINE IN MALARIAL FEVER.

By WM. ANDERSON, M.D.,

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In the *American Practitioner* for October, 1878, appears a short and practical article on the treatment of intermittents with iodine, by Dr. G. W. H. Kemper. He narrates the experience of himself and several others who have tried this remedy, and concludes that the results are equal to those obtained from quinine. He is anxious that others should experiment and report.

As the use of iodine in malarial affections seems to be comparatively unknown, I shall briefly relate my experience with it. During the last four years, I have prescribed it in almost every case of a malarial nature which came under my care. I made no selection of cases, and they embraced all ages and conditions of life. The majority were dispensary patients, and resided chiefly in that section of South Brooklyn known as Gowanus. The severer forms of the disease are not so common in this locality, but many of the cases were serious enough to thoroughly test the efficacy of the treatment. Dr. Fordyce Grinnell, physician to the Wichita Agency, Indian Territory, had doubtless many typical cases in the 147 which he reports, and he considered the results equal to those obtained from sulphate of quinine.

The routine prescription was five to fifteen minims tincture of iodine, in a wineglassful of water, three times a day after food. For children I usually gave about five minims in syrup or glycerine, and to adults seldom more than fifteen minims in plain water. As the simple tincture is not miscible with water, it is

necessary to add a little iodide of potash to the mixture; or the compound tincture of iodine may be used, keeping in mind that it has only half the quantity of iodine contained in the simple tincture. In dispensary practice, or where the greatest economy is desired, the compound liquor of iodine may be used, making allowance for the difference in strength. Taken after food, and freely diluted, it is quite palatable, and rarely irritates the stomach—certainly not nearly so often as the ordinary quinine mixtures. It is advisable to warn mothers that if the child does reject a dose, it will cause an ugly stain on the linen.

The results of this treatment in over 200 cases greatly exceeded my expectations. Though it is impossible to follow up cases so accurately in dispensary as in hospital practice, a large percentage returned, sufficient, along with my private patients, to make it certain that the results were not merely *post* but *propter hoc*. In quite a number of cases there was no return of the paroxysm after the commencement of the iodine; and it was seldom necessary to repeat the usual two-ounce mixture (teaspoonful doses). In a few cases apparently no benefit was derived; and in several the symptoms returned on stopping the medicine, but left again on its renewal.

Iodine possesses in an eminent degree the antiseptic properties so prominent in those drugs which have been found useful in malarial affections, such as quinine, arsenic, carbolic acid, eucalyptus globulus. This may serve as a hint as to its *modus operandi*.

There is no novelty in the use of iodine in malarial disease, as it has been used in this country many years ago, and also on the continent of Europe; but it seems to be less known than its merits deserve.

To sum up: Iodine seems to be equally efficacious with quinine in the treatment of intermittent fever; is much more palatable, especially to children; possesses no appreciable bad effects; and is infinitely cheaper—a consideration not to be despised these hard times.

Reports of Hospitals.

COOK COUNTY HOSPITAL, CHICAGO.

PUDENDAL HEMATOCELE.

Mrs. T., an Irish woman of vigorous appearance, 40 years old, came into the hospital May 2, 1878, complaining of a swelling in her privates. She said her husband had, a week before, come home one night drunk, and in repeated intercourse had used great violence. The result was an appearance immediately of a swelling on the right side of the vulva, that had caused her some pain and prevented her sitting down without the greatest suffering. She had also experienced much suffering in standing. She was quite feverish on admission, the pulse rate being 126, and the temperature 103¼° F. The right labium majus was found to be greatly swollen, and on the mucous surface was an opening rather more than a quarter of an inch in diameter connecting with a considerable cavity in the interior of the swollen mass, which cavity was full of coagulated blood. The cutaneous surface of the right labium, as well as that about it, gave evidence of slight bruising. Just above the right groin a dark discoloration of skin gave evidence of extensive subcutaneous injury.

The opening in the labium was slightly enlarged by the insertion of the finger, the clots were broken up and evacuated, and a T-bandage drawn tightly over a pad of cotton placed upon the swollen surface. There was no hemorrhage. In two days the fever had disappeared. The recovery was rapid.

CASE OF A WOMAN WHO, WITH SERIOUS UTERINE DISEASE, WALKED A PEDESTRIAN MATCH OF SEVERAL HUNDRED MILES.

Mrs. W. R., a muscular little French woman, 19 years old, who had lately taken up the business of pedestrian, was admitted into the gynecological ward February 6, 1878, complaining of pain and tenderness in the abdomen, headache, and too profuse uterine hemorrhage.

She said that two years ago she gave birth to a child at term. She had twenty convulsions at that time. The child had nine convulsions, and died at the end of one day from its birth. Since then she has never enjoyed as good health as previously. Her menstruation has been irregular, sometimes disappearing for six months. Six months after the labor referred to she walked 833 miles in five days.

Five weeks before admission she aborted, being three months advanced in pregnancy. The cause appeared to have been a fright which she received two weeks before the miscarriage. She remained in bed eight days, then got up and was about the house, bleeding more or less every day. In a few days, feeling better, she walked for exercise thirty miles in four hours. Following this she bled more.

The uterus was found, on examination, large and tender; there was granular degeneration of the os, and a unilateral laceration of the cervix. The sound passed into the uterus two and three-quarters inches, developing no tenderness or pain. A free application of chromic acid was made to the os, which produced a large eschar that did not separate for several days. Following the application there was considerable pain and congestion of the vaginal mucous membrane. Glycerine tampons were introduced and codeia given internally as required for pain. The patient was better by the 15th of February, nine days after her admission, and was allowed to go out.

A few days later she stated to one of the hospital internes whom she met on the street, that after leaving the hospital she did not have an unpleasant symptom, not even a pain of any kind. In less than three weeks after leaving the institution she walked a public match of several hundred miles against time.

RECTO-VULVAR FISTULA — OPERATION AND SLOW IMPROVEMENT—ULCERATION AND STRICTURE OF RECTUM.

Mrs. F. L., æt. 25, was admitted October 20, 1877. She had always enjoyed good health till after her marriage, which took place three years before. When married a year and a half she was delivered of a child at term. This was her only pregnancy. Her labor lasted nearly four days and resulted in considerable laceration of the perineum, although the delivery was accomplished without instrumental aid. A month after confinement an abscess which had formed in the right labium majus was opened.

Subsequent to her confinement she had had bearing-down pains constantly in her back and radiating to her thighs, leucorrhœa, headache, and general debility. Three months before admission she had noticed that fecal matter was escaping through the vagina. Two months later she began to have pain during the act of micturition.

She was not aware of ever having had syphilis, although her husband had at one time some secret

disorder, during the continuance of which he had frequent intercourse with her. She declared she had never had sore throat or any enlargement of glands or any skin disorder, although an acne of the face was plainly noticeable.

She was examined and found to have a recto-vulva fistula.

She was given an antisyphilitic mixture of iodide of potassium and iodine; a cleansing wash was ordered, and iodine and creosote (sat. sol.) was applied to the edges of the fistula.

At the end of a month, no improvement having occurred in the fistula, it was laid open by Prof. T. D. Fitch with the galvano-cautery. The operation transformed the fistula into a laceration of the perineum of the fourth degree. At the same operation two small hemorrhoids were removed.

Fomentations were applied to the parts for a few days and morphia given for pain.

On December 6th, the ulcerated surface was ordered to be dusted with iodoform daily. For a time, under this treatment, healing went on rapidly; then it became tardy, and finally ceased. During January and February several applications of solid nitrate of silver were made. March 4th, a speculum was introduced into the rectum, when the anterior wall of that cavity was found to be ulcerated over nearly two inches from the margin of the wound. The sides of the perineal rupture were by this time nearly cicatrized.

To the ulcerated surface of the rectum various stimulating applications were made from time to time, with the effect of healing the larger portion of it by the end of three months. For a time a saturated solution of tannin and glycerine was applied every second or third day. The improvement from this was hardly perceptible. The most effective local treatment was the application of pure nitric acid once in ten to fifteen days. This was followed by most marked improvement both in the healthy appearance of the granulations and in the abbreviation of the ulceration. In making the applications great care was exercised to have the quantity of acid used (on a swab of cotton) very small, and to have it touch only the ulcerated surface. She left the hospital May 28th, 1878, with several small ulcerated spots on the anterior wall of the rectum unhealed. There had developed during the healing that had taken place a stricture of the rectum about two inches from the verge of the anus and at the upper border of the healed surface. At the most constricted portion the diameter of the gut was three-quarters of an inch. Defecation was quite painful, unless the fæces were very soft.

Several times during the last month's residence in the hospital the patient declared she passed considerable quantities of purulent matter per rectum. This fact led to the suspicion that ulceration had taken place above the stricture, but this suspicion could not be verified by an examination.

The patient did not menstruate but twice during her stay in the institution, both times within two months of her departure.

THE TREATMENT OF SEA-SICKNESS. — C. J. S. Digges, M.R.C.S.E. (of St. Louis, Mo.), recommends hypodermic injections of morphia over the epigastric region in sea-sickness. In 200 passengers experimented upon, the majority were completely and permanently relieved; in the others, relief for twelve to forty-eight hours followed, allowing the partaking of food during the interval.

Progress of Medical Science.

TREATMENT OF DIPHTHERIA BY LARGE DOSES OF CALOMEL.—Dr. Reiter has seen very excellent results from the use of large doses of calomel in severe cases of true diphtheria. To adults he gives twenty grains, and repeats the dose several times at intervals of an hour, and then gives seven and a half grains every hour, until the stools are entirely watery, and, when possible, colored with bile. To small children, the drug is given in doses of three to nine grains, in ice-water, until the same effect is produced. Collapse and salivation have not occurred in any of his cases. He has administered as much as 230 grains of calomel in the course of a few days to children three and four years of age. He recommends the internal use of chlorate of potash at the same time. Of three children under five years of age, one died on the second day of treatment.—*Philadelphia Medical Times*, 1878, No. 264, and *Centralblatt für Chirurgie.*

TREATMENT OF OBSTINATE SCIATICA BY SUBCUTANEOUS INJECTIONS OF NITRATE OF SILVER. — Dr. Dureau has collated the cases of obstinate sciatica treated in the Parisian hospitals by Damaschino and Guérin-Rose on Luton's plan, and has deduced from them the following conclusions:

1. The subcutaneous injections of nitrate of silver are to be recommended in cases of inveterate sciatica.
2. These injections, though irritating to the tissues, may be undertaken without any fear of evil consequences.
3. The method renders it possible to reach the diseased spot and to insure the action of the remedy.
4. Improvement and recovery take place rapidly under this treatment.
5. The subcutaneous injections of lunar caustic are more active and less dangerous than the actual cutting, which is so frequently recommended for sciatica.

Luton employed a ten per cent. solution of the nitrate of silver, and injected from twenty to twenty-four drops, but Guérin-Rose uses a fifteen per cent. solution, and injects fifteen drops, and Damaschino takes one of only four per cent., and injects only five drops. Of twelve cases treated by Guérin-Rose, most were cured, a few were improved, and a few were not affected at all. No unfavorable consequences were observed in any of the cases. Dr. Dureau advises that the needle be introduced deeply, so as almost to reach the nerve.—*Allg. Med. Cent. Zeit.*

ON THE USES OF ESERINE, ATROPINE, AND DUBOISINE, IN OCULAR THERAPEUTICS.—Dr. Wecker, of Paris, sums up as follows the properties of the two alkaloids, eserine and atropine. Eserine: 1. Lowers the intraocular pressure; 2. Diminishes the conjunctival secretion by contraction of the vessels; 3. Lessens the diapedesis in general. Atropine, on the contrary: 1. Increases the intraocular pressure by vascular dilatation, which may go so far in some cases as to produce glaucomatous phenomena; 2. Increases the conjunctival secretion; 3. Rolls back the iris towards the circumference of the anterior chamber, and forms the stasis in the eye of liquids destined to filtrate out. He holds that atropine should be rejected and eserine employed in its stead in all cases of corneal lesions; in iritis, however, atropine still retains its pre-eminent place. Duboisine is still more active as a mydriatic than atropine, and is especially valuable in the cases in which the latter excites conjunctival inflammation. —*Lyon Médical.*

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HYSTERO-EPILEPSY.

Nearly ten years ago, in the first volume of the "Leçons sur les Maladies du Système Nerveux," Charcot described with great clearness a fearful malady to which he applied the name hystero-epilepsy. Similar cases had been reported by various French writers from time to time, at former periods, even as far back as the miracles of the Jansenists and the "convulsionnaires" of St. Medard. But to Charcot belongs the credit of having first made exact scientific investigations in this direction, and during the last five years he has virtually made the subject his own. This topic appears to present peculiar fascinations for our transatlantic brethren. The French medical journals teem with discussions upon hystero-epilepsy, as well as upon the kindred matter of metallo-therapeutics; and the interest excited thereby has become so great that a commission, composed of Charcot, Luys, and Dumontpallier, was appointed by the French Academy to prepare a report on this topic. The infection has also spread across the British Channel, and several of the more important English periodicals devote a considerable portion of their columns to its discussion.

Extremely few observations in this direction have been made in our own country. Whether it is that the disease is of much rarer occurrence here than abroad, or that it has hitherto passed unnoticed because the attention of the profession was not directed toward it, we will not venture to decide. It is a very significant fact—and one to which we shall revert at more length hereafter—that the chief breeding-place of this disease appears to be within the walls of the Hospital of la Saltpêtrière.

In depicting the symptoms of this affection we shall rely, in the main, on Charcot's masterly description. The disease belongs almost exclusively to the female sex. It usually begins in the first few years after the establishment of menstruation, although, in rare cases, it may develop before the inauguration of the menstrual epoch and may continue after the latter has ceased. The etiology, apart from the causal factors that are operative in ordinary hysteria, is extremely obscure, and we are merely able to gather from the vague statements that have been made in this regard, that violent mental emotions of a depressing nature sometimes act as exciting causes.

The disease may be divided, for the sake of convenience, into two periods, viz., the paroxysmal and the interparoxysmal. We shall first describe the condition of the patient during the latter stage.

One of the most prominent symptoms is hemianæsthesia, involving the face as well as the upper and lower extremities of the same side. Tactile sensibility, together with sensibility to pain, are both involved to an extreme degree. In fact, the analgesia and anæsthesia are usually so complete that the skin of the patient may be completely pierced by a needle or other sharp instrument, without any knowledge of the fact being evinced. Insensibility of the affected side to variations of temperature is also a common occurrence. If the skin of the anæsthetic limbs be pricked with a needle, blood will not flow as readily as from the opposite limb, thus proving that anæmia of the parts also exists. The anæsthesia frequently involves the special senses. Thus, taste and smell may be either diminished or entirely wanting on the affected side, while on the other side of the median line, these senses are perfectly normal. Sight is also notably involved, either as simple amblyopia or in the remarkable manner first described by Galezowski under the name of achromatopsia. When this symptom is present, the patient is unable to distinguish either one or several of the primary colors with the affected eye. In rare cases the achromatopsia is absolute; that is to say, a picture, however variegated its component tints may be, appears to be drawn in black and white. It has been observed by Charcot that, as a general rule, red and blue are the colors which are usually retained, even when all the others are lost—and, furthermore, that violet disappears most readily.

The anæsthesia does not involve the viscera, and, in fact, hyperæsthesia of one of the internal organs, viz., the ovary, is an essential feature of the disease. The ovarian tenderness is always on the same side as the anæsthesia; and if the former condition exist on both sides, the anæsthesia usually extends over the whole body. Considerable importance has been attached, especially by French neurologists, to ovarian hyperæsthesia as a symptom, not alone of the affection under discussion, but also of the ordinary forms of hysteria. Usually this symptom is observed only on the left side, very rarely on both.

The skin, together with the muscles situated over the site of the left ovary, are generally analgesic as well as anæsthetic, and pain is only produced in this region when deep, firm pressure is made with the fingers, and the ovary is thus pressed against the posterior walls of the pelvis. The hyperæsthetic ovary is fre-

quently the starting-point of an aura which precedes an hystero-epileptic seizure, and we shall describe this at further length in the description of the paroxysm.

A certain amount of caution must, however, be exercised in making a diagnosis of ovarian tenderness. We have seen well-informed, judicious physicians make a diagnosis of this condition from a simple affirmative answer on the part of the patient, when, pressure having been made over the suspected ovary, she is asked whether tenderness exists or not. It must be remembered that hysterical patients can manufacture to order any symptom regarding which we interrogate them. We must also be able to exclude inflammatory disturbances, either in the ovary itself or in some of the surrounding pelvic tissues. In addition to all the symptoms we have just mentioned, the ordinary and less severe phenomena of hysteria are commonly present.

Although this condition may last for years, and sometimes even for a lifetime, the physical and mental condition of the patient may, in other respects, be in a normal state. But the distinguishing features of this affection are not to be found in the phenomena which have been thus briefly sketched, but rather in the paroxysms which appear at varying intervals. In some cases, the paroxysms appear with fearful frequency. Charcot relates the history of a patient who had 150–200 in a single day.

The paroxysm may be divided into the following stages, viz.: the epileptiform period—subdivided into the tonic and clonic stages, the period of violent movements (état des grands mouvements), and the emotional period (periode passionelle).

Sometimes the attack begins by an hysteric aura, usually starting from the hyperæsthetic ovary.

The aura begins by lancinating pains in the site of the ovary, which last a few minutes. A globus hystericus then ascends from the ovary to the epigastrium, where it produces nausea and palpitation of the heart. Then follows buzzing in the ear on the same side as the hyperæsthetic ovary, with pain in the corresponding temple. The patient finally becomes unconscious. In other cases, unconsciousness occurs without any previous aura. The paroxysm begins suddenly, the patient utters a cry, the face becomes extremely pale and she loses consciousness. Tonic rigidity immediately appears in all the muscles of the body, the patient foams at the mouth and sometimes bites the tongue. The face now becomes cyanosed, the muscles relax and the breathing becomes stertorous in character. Clonic convulsions next make their appearance throughout the body, and with them the first stage closes. Hitherto the phenomena have been simply those of an ordinary epileptic fit, and last only a couple of minutes. The clonic movements subside and the stage of violent movements (grands mouvements) begins. The patient throws the limbs in all directions, arching the body and throwing herself alternately on the occiput and heels and from one side of the bed to the other with almost inconceivable rapidity and violence, so that several men are required to prevent her doing injury to herself. After this stage has lasted for a few minutes, the patient suddenly passes into the emotional stage. In this period, the countenance of the patient depicts the liveliest emotions, such as hate, fear, joy, sorrow in the most vivid manner, and with an instantaneous transition from one to the other.

The patient then usually laughs or cries in the ordinary hysterical fashion, and soon subsides into her normal condition. Sometimes, however, it is found that various kinds of hallucinations, paralysis of the bladder, and perhaps of the constrictors of the pharynx, persist for several days after the attack.

All the paroxysms are not, however, of the typical character which we have above depicted. Sometimes one stage predominates to such an extent as to render the others comparatively insignificant, and at times one period may be entirely wanting. In some cases the paroxysm can be instantly arrested at will and at any stage of the attack, by employing firm pressure over the hyperæsthetic ovary. In others, however, such pressure either merely moderates the severity of the attack, or exercises no influence whatever upon its intensity or duration.

The attacks are either spontaneous—perhaps preceded by an aura—or they may be produced at will by the irritation of an epileptogenic zone which may be situated in any part of the body. In some cases the paroxysms are increased in frequency at the menstrual period.

The prognosis as regards recovery from the disease is exceedingly gloomy.

The most interesting portion of this subject, viz.: the peculiar modifications produced in the condition of the patient by metallo-therapeutics and other agencies of an analogous character, as well as the bearings of this latter topic on the treatment of hysteria in general, will be reserved for discussion in the next number.

THE YELLOW FEVER FUND.

This is progressing slowly, and in few quarters only, but still somewhat satisfactorily. The Medical Society of the County of New York, in which the movement originated, has collected about $2,600. The Chamber of Commerce of the State of New York has put $2,000 to the credit of the Society, when it is fully prepared to distribute its funds wisely; the Medical Society of South Carolina has forwarded $443.55 for the same purpose, and the Kings County Medical Society has collected over $500. Still this is a small sum to distribute among the families of over one hundred physicians who have died at their posts during the late epidemic. We hear that Cincinnati and Chicago may do something, and there were rumors

some time ago that the Rhode Island Medical Society was moving.

The public and the medical profession have subscribed enough, and there is no great propriety, or perhaps necessity, for asking them to subscribe more. But it is believed that almost every Mayor of the great cities, the Boards of Commerce and Trade, and many secular and religious associations, have cash balances on hand which have not been promised or given away. For these balances, or some part of them, the medical profession in every large city, State, and county should now ask, and urge the claims of the families of those professional brethren who have fallen in the discharge of their duty. Almost all of the little that was done to stay the terrible epidemic was accomplished under the guidance of the medical profession, and it should not now be forgotten. If the 60,000 regular physicians in the United States had concentrated their efforts upon aid to their toiling and suffering colleagues and their families, much might have been done, with little trouble or expense to any one of them. But all gave to general subscriptions and to their churches, and forgot their brethren. The telegraph operators, wiser in their generation, raised $60,000, in small sums, for the benefit of their class, and paid large sums for doctors, nurses, medicines, comforts, clothing, etc., in addition to what they received from the Howard Associations and the general public.

The Mayor of the City of New York has promised to give something to the funds of the Medical Society of the County of New York. Cannot the officers of every State and county medical society follow the glorious example set them by the Medical Society of the County of New York, of the Kings County Medical Society, of the Medical Society of South Carolina, of the Ulster County Medical Society, and the District Medical Society of Union County, New Jersey? The way is easy, and the results may easily be made great.

SOCIETY DISCIPLINE AND MEDICAL CERTIFICATES.

THE first annual report of the Committee of Ethics of the Medical Society of the County, which was presented at a recent meeting of that body, states that during the previous eleven months one hundred and seventy-five charges of alleged breaches of the Code were made against members. This is a somewhat remarkable fact, but especially is this so when it is stated that all of the cases were amicably settled. The result is certainly very gratifying, and proves, as the RECORD long ago suggested, that when some proper and authoritative explanation of the Code should be made, discipline would be maintained without trouble. Our readers will remember to what an abuse the business of certificate-writing was carried, and the appeal that was made by us for the formation of a committee which should be competent to prevent the shameful parade in the daily papers of the names of the certificate-writers of several mineral-waters. If not as the direct result of such repeated entreaties, it is certain that a committee on ethics was in due time formed and that the first cases examined were the certifiers to the mineral-waters in question. After much hard work on the part of the late President of the Medical Society of the County, Dr. J. C. Peters, and of the Committee of Ethics, but particularly by the Secretary of the Committee, Dr. O'Sullivan, the whole matter was brought to the point of a proper interpretation of the spirit of the Code regarding medical advertising. As a consequence the name of any respectable medical man no longer appears in the daily papers in the shape of a certificate to any mineral-water, wine, or proprietory medicine. And when we are informed that despite the number of offences committed, every case was settled, without being brought to actual trial, we cannot too highly compliment the judgment of the committee which made such a result possible.

Reviews and Notices of Books.

A PRACTICAL TREATISE ON THE MEDICAL AND SURGICAL USES OF ELECTRICITY. By GEO. M. BEARD, A.M., M.D., and A. D. ROCKWELL, A.M., M.D. Second edition, revised, enlarged, and mostly rewritten. With illustrations. New York: William Wood & Co., Great Jones Street. 1878.

THE first edition of this book was favorably received by the profession, and placed among the standard works of reference in the department of electro-therapeutics. The second edition is considerably larger than the first. It has been made so by the addition of new matter, while the old has been thoroughly revised and brought up to the most advanced views concerning the physical and the physiological relations of electricity. The section on electro-physics has been enlarged, because the authors believe that very much of the failure which attends the use of electricity arises from ignorance of its physical relations. An entire chapter is devoted to the expounding of Ohm's law, which is regarded as the basis of all electrical measurement. This law bears the same relation to electricity as gravitation does to astronomy, and the theory of undulation to optics. It is that "the quantity of electricity passing through any point in a circuit varies directly as the electro-motive force, and inversely as the resistance." The first seven chapters of the book are given to electro-physics, and the subject is treated in a comprehensive and thorough manner.

Electro-physiology is studied in the twelve chapters which immediately follow. Here the laws of electricity and a description of the phenomena produced by the action of electricity in the body in health are given. Its action upon various parts of the body is recorded separately, as, for example, upon the skin, upon the brain and the spinal cord, upon the sympathetic and the pneumogastric, upon the motor and the sensory nerves, upon the voluntary and the involuntary muscles, etc.

In natural order the section on electro-therapeutics immediately follows, and contains an exhaustive *résumé* of what is known concerning medical and surgical electricity, with the subdivisions, electro-diagnosis and electro-therapeutical anatomy. In these chapters there is a concise description of apparatus employed, together with the method of use, in order to meet special indications. In this section we find extensive clinical records, embracing the histories,

of cases and the results obtained in the electrical treatment of almost every form of medical disease. It is doubtless the most complete collection of clinical observations in electro-therapeutics that can be readily reached by general practitioners, and is a fountain from which all medical men can draw with benefit. Every medical man, in these days, is at times directly interested in the subject of electro-therapeutics, and he can find the answer to many practical questions in this portion of the volume.

The electrical treatment of diseases commonly known as surgical has extensively engaged the attention of the profession, and a section therefore appears on electro surgery. Here again is a collection of cases, and the results obtained by electrical treatment of most of the diseases which fall under the special care of the surgeon. The histories of the cases of benign and malignant tumors, and the remarks made upon them, are especially interesting because of the pretentious claims which at times have been made regarding the electrical treatment of this class of diseases. With reference to fibroids of the uterus, the authors state that they have never seen a "hard uterine fibroid tumor *disappear* under electrolysis." With reference to ovarian tumors, however, they believe that electrolysis is worthy of a better trial than it has yet received. The most favorable results have been obtained in recurring cysts and fibroïds, and next in epithelioma, of which several have been treated successfully. The most unfavorable prognosis in the electrical treatment of tumors is in connection with scirrhus. The section as a whole is interesting. Indeed, the entire book is well arranged, is concise, comprehensive, and well adapted to the wants of the expert or of the general practitioner. The profession is indebted to the authors for the easy style in which they have given it the most complete summary upon the subject in our language. The book is printed on heavy paper and with large type, and presents a very creditable appearance.

HANDBOOK OF MODERN CHEMISTRY, Inorganic and Organic, for the Use of Students. By CHARLES MEYMOTT TIDY, M.B., F.C.S., Professor of Chemistry and of Medical Jurisprudence and Public Health at the London Hospital, etc. 8vo, pp. 780. London: J. & A. Churchill, New Burlington Street. 1878.

THE author very pertinently states in his preface that, as his work is a new one, some good excuse should be given for its appearance. His reasons for adding another to the many excellent treatises on the subject are eminently good, and commend his labors to the considerate attention of those for whom the work is intended. When fresh from the schools, he was appointed joint lecturer in chemistry with the late Dr. Letheby, at the London Hospital. "Consequently," says our author, "my lecture notes were prepared when familiar by practical experience with the wants of a student." This original plan, after years of elaboration, forms the basis of the present volume, and may justly be considered as thoroughly practical in character. There is, so to speak, a combination of the generalization of the lecture course with the accurate and painstaking detail of the text-book. While the outlining of the subjects is broad and comprehensive, the details are minute and methodical. In regard to the latter point, each compound is considered under the several heads of history, natural history, preparation, properties (sensible, physical, and chemical), uses in medicine and in the arts and manufactures; and lastly, tests. In the body of the work are a series of analytical tables showing the reactions of the commoner metals, and used as a basis for practical instruction in the laboratory. The reactions of organic bodies are given at the end of the several chapters devoted to their study. By way of compromise with the old system and the one growing into favor, the several equations are stated both in the molecular and the constitutional formulæ. The work, as a whole, gives evidences of careful painstaking, of accurate details, of broad generalization and special adaptation to medical chemistry, is well calculated for a text-book, and will meet the wants of the advanced and ambitious student. The book is well printed and very tastily bound.

A TREATISE ON PHYSIOLOGY AND HYGIENE, for Educational Institutions and General Readers. Fully illustrated. By JOSEPH C. HUTCHISON, M.D., Brooklyn, N. Y. New York: Clark & Maynard, 8 Barclay Street. 1878.

A NEW edition of this work gives us occasion to repeat what we said on the appearance of the original, viz.: that for purposes of common school instruction in physiology it is equal to any and surpassed by none.

Reports of Societies.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, Nov. 4, 1878.

DR. J. C. SHAW, PRESIDENT, IN THE CHAIR.

CEREBRAL SYMPTOMS FROM IMPACTED CERUMEN IN THE EAR.

DR. W. A. HAMMOND read a brief paper upon the above subject. It consisted essentially of the report of a number of cases in which marked cerebral symptoms were developed, such as hallucinations, temptations to suicide, tinnitus aurium, noises, voices, etc., and disappeared upon the removal of impacted cerumen from the ear.

Commenting upon the cases, the doctor gave his view with reference to the cause of the roaring produced by the introduction of the end of the finger into the ear—namely—that it was the circulation in the finger that was heard, the finger simply acting as a conductor of the sound.

DR. C. A. LEALE referred to two cases which illustrated the practical importance of the subject of the paper. One was that of a young man, who, on account of the gradual development of cerebral symptoms, was advised to discontinue his college course. He suffered considerably from pain in the ears, and in obtaining a history of the case it was learned that when two years old, fourteen years previously, he had been in the habit of putting beans into his ears. One bean had been removed from one ear, but another remained, became surrounded by wax, pressed upon the tympanum, and excited all the cerebral symptoms recognized. The bean was removed, and the symptoms, to a very great extent, disappeared, but the prospects of the young man were ruined, for he had already given up his studies and engaged in some simple farm labor. The second was that of a lawyer fifty-four years of age, who had been recommended to give up his profession because it was almost impossible for him to hear the judge's remarks or the answers from a witness. On examining the ears nothing at first could be seen. The external meatus was small, and the canal could be illuminated only with considerable difficulty. Finally, a dark mass was discovered, which was readily removed with warm water injections, and it proved to be inspissated cerumen. With its removal all disagree-

able symptoms disappeared, and the gentleman renewed his professional labor.

Dr. Grey remarked, with reference to the hallucinations which had been attributed to impacted cerumen in the ear, that the question arose whether in any of the cases the hallucination would have been present had there not been a predisposition to insanity, either hereditary or from the previous existence of insanity from other causes. With an excitable condition of the nerve-centres, produced by previous insanity, it was easy to understand how any peripheral cause might develop the predisposition.

Dr. Hammond remarked that he was not able to state whether, in the cases reported, there was any predisposition to insanity. The curious part of some of the cases was, that the patients did not suffer from illusions, but rather from what might be called perversion of hallucination. They did have noises in the ears, and those noises were converted into real voices. He did not know of any example in the entire range of cerebral phenomena, in which a perverted sensation was converted into speech for instance, or anything which conveyed a distinct idea to the senses. The doctor then referred to the danger which attended the introduction of sea-water into the ears, and mentioned cases in which marked cerebral symptoms had been developed in consequence of such irritation.

Dr. Webster regarded the statement made by Dr. Hammond with reference to the cause of the noise in the ear when the finger was introduced into the external auditory meatus, as entirely new and one which he could not accept. He believed that the noise was produced by pressure of the air against the tympanum, and not simply by introducing the finger into the ear. For, if a cork was introduced into the ear and pressure made, the noise would be produced the same as when the pressure was made by the finger.

Dr. Kiernan remarked, with reference to hallucinations based upon perverted sensation, that a patient came under his observation who believed that he had a doctor in his abdomen who was constantly talking to him, but the speaking was not through the ears. With reference to inspissated cerumen, he had found many insane patients whose ears were filled with it, but the removal of the wax had not in any case been followed by removal of the hallucinations.

Dr. Roosa remarked that after spending some years in the examination of cases, he had not been able to satisfy himself with reference to the etiology of inspissated cerumen. With reference to its existence he would simply say that he did not believe any person who had had inspissated cerumen more than once in his life had sound ears. If inspissated cerumen occurred more than once in the same person it was evidence that something of the hearing power had been lost, and that it would become still further impaired. With reference to hallucinations, Meyer, of Hamburg, had removed inspissated cerumen from the ears of a large number of insane persons, but in only two cases did the hallucinations disappear after the removal of the wax.

Dr. Sessell had directed his attention to one case in which hallucinations were removed by the removal of impacted cerumen. With reference to the causation of noise in the ear when the finger was introduced into the auditory canal, he believed the chief cause was the pressure exerted by the finger, and that the arterial circulation had but little to do with it.

Dr. Shaw believed with Dr. Grey that mental symptoms would be produced by impacted cerumen only in those who had a predisposition to mental disease.

Dr. Leale made special reference to the irritation produced by crystals from sea-water left in the ears after bathing, and the importance of carefully washing the ears out with warm water.

ABSCESS OF THE BRAIN.

Dr. J. C. Shaw presented specimens from a case of abscess of the brain.

The patient was a man thirty-seven years old, who had had suppurative inflammation of the ear for a number of years. Two weeks previous to his death he had a little extra pain in the ear, but it passed with slight notice. The pain becoming more severe about four days before his death, a consultation was held and an incision was made over the mastoid process for the relief of what was supposed to be inflammation affecting the mastoid cells. The man, however, became rapidly worse, and passed into a state of coma. The mastoid process was also trephined, but no relief was obtained. At autopsy, a small necrosed point was found in the dura mater just above the ear, with a sinus leading up to an abscess. There was extensive meningitis, which was regarded as the probable cause of death. The case was mentioned for the purpose of drawing attention to what was believed to be

A NEW FACT IN CONNECTION WITH MENINGITIS AND DISEASE OF THE MIDDLE EAR.

Dr. Shaw stated that he had occasion to make post-mortem examinations in five or six cases of meningitis associated with middle-ear trouble, and the question arose, how was the meningitis produced?

In three cases he had been able to trace the pus along the Gasserian ganglion and to the fifth nerve.

Dr. De Rossett thought we should not forget, in this connection, the possible transference of trophic changes from one portion of the body to another.

The Society then adjourned.

Correspondence.

THE DETERMINATION OF SEX IN UTERO.

To the Editor of The Medical Record.

Sir:—I notice an editorial in your journal of the 2d inst., under the above caption, and giving the theory of Dr. J. W. Swift, from an article in the *Boston Medical and Surgical Journal*. If this theory be correct, the product of conception preceding menstruation will be female, and that of conception succeeding menstruation will be male.

Dr. Napheys, in his excellent treatise, "The Transmission of Life," intended for popular reading, without giving any theory upon the subject, lays down a rule for the production of the sexes at will, which includes a statement exactly the reverse of the conclusion of Dr. Swift's theory. The discovery of this law of conception he ascribes to Prof. Thury, a French veterinary surgeon of the Academy of Geneva, who made a large number of experiments upon domesticated animals. A certified report to the Agricultural Society of Canton de Vaud, Switzerland, 1867, concludes thus: "In short, I have made in all twenty-nine experiments after the new method, and in every one I succeeded in the production of what I was looking for—male or female. I had not one single failure; consequently I do declare the law discovered by Prof. Thury to be real and accurate." Of course the opportunity for studying this law in the human subject is much more limited and uncertain, but Dr. Napheys

contends that all intelligent observation tends to confirm its existence. Of his illustrations on this point I give only one: "Physicians constantly observe that if labor comes a few days before 'full term,' or just at term, the child is more likely to be a female; but if labor is delayed beyond term, which is the same as saying if the conception took place quite a number of days after the cessation of menstration, then it is more likely to be a boy."

Since I first read Dr. Napheys on this subject, I have made it a rule at every delivery—one hundred and ten cases—to inquire the length of time from the last menstruation, and, excluding one case where menstruation only ceased at the end of the fifth month of gestation, three premature deliveries and less than a dozen cases where the exact period was not remembered, in every single instance where gestation continued longer than what was considered full term the child was male, and when it did not, the child was female. The value I attach to these observations is only corroborative, because of the impossibility of fixing the exact time of fecundation and the variation in the time of gestation. During this time, however, I have had two cases in which, by reason of my intimate professional relation to the parties who were entirely reliable and of much more than average intelligence, I have been able to very nearly fix the period of conception, and in each case the event proved the correctness of the rule, as given by Dr. Napheys. In the first case the only intercourse during the menstrual month took place on the 9th of September; menstruation was due on the 14th, but did not appear, and on the 13th of the following June the lady was delivered after a thirty hours' labor of a male child. In the other case, intercourse was had twice during the menstrual month—the first, November 30th, thirty-six hours after the cessation of the flow, and the second the following day, December 1st. On the 31st of the following August I delivered this patient of a female child after a labor of ten hours' duration. JOSEPH A. MUDD, M.D.

CHAIN OF ROCKS, MO., Nov. 11, 1878.

THE GERM THEORY OF DISEASE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—In order not to occupy your valuable space unnecessarily, permit me just to say, in reply to Dr. Neftel's letter in your last issue, in regard to experiments showing the occurrence of living organisms in blood, that I should be very sorry to claim, or even to receive, without protest, credit as an original investigator which was not justly my due. The fact is, that my observations were laid before the Medical Association of Central New York, Prof. E. M. Moore, President, at Rochester, June 16, 1868, reported in the *Rochester Democrat* for June 17th, and published in full in the *American Journal* for July, 1868, which appeared on the 8th or 9th of that month.

Scientific men have agreed that the independent observer who first publicly announces a new fact is entitled to the credit of its original discovery; and therefore, as I have by a curious coincidence antedated Dr. Neftel in reading a report of my experiments before a regularly organized medical society by three days, and in publishing it by six days, I trust the claim of priority put forth in my lecture before the Social Science Association will be acknowledged.

Besides, my demonstration of the truth in question directly concerned *human beings*, and was therefore, I submit, far more important to medical science.

Very respectfully yours, etc., JOS. G. RICHARDSON.

New Instruments.

ATOMIZING INSTRUMENTS.

NO. II.—DR. J. DE BEER'S ATOMIZING APPARATUS.

THE apparatus of Dr. De Beer, of Boston, is intended not only for atomizing purposes proper, but for vapor baths, for fomentations, and for use as a steam croup-kettle. It has connected with it a number of appliances, each of which is intended to fulfil a certain indication. The construction of the steam atomizer can be seen at a glance. The stand is circular, which is possibly a necessity in view of the different uses to which it is put. Otherwise, a broader base would give a firmer support to the apparatus. The support for the medicine-cup and face-shield is attached to the base by a screw, and is of course removable. This is of no special advantage when the apparatus is used merely as an atomizer. There is but one opening in the boiler which is used for filling with water, and for the escape of steam. It appears to us that a separate opening for filling and for the safety-valve would be more convenient.

FIG. 1.

As an atomizing apparatus, it is thoroughly efficient, throwing the spray forcibly and uniformly. The face-shield is attached to the upright rod by means of a spring catch, which is a very convenient arrangement, as is also the movable handle for the stand. A notable improvement would be a non-conducting handle for the boiler itself.

The apparatus seems, however, to be specially adapted for cases of croup, having attached to it a so-called croup-kettle, in connection with which can be used different medicated vapors.

The steam of the boiler is made to enter a cup P, over which is an inverted bottle M (Fig. 2), from the neck

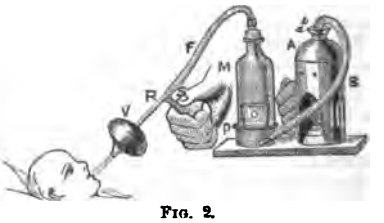

FIG. 2.

of which passes a tube F, connected with a hand apparatus V, for condensing steam, and directing the spray against the face.

The vapor is medicated by material contained in the glass chamber O. By attaching the rubber tube B, directly to the boiler A, steam can be applied to any part of the body for the purposes of local fomentation.

and by inserting the free end of tube in the cup in which medical materials are contained, a medicated vapor-bath can be administered.

Vapor can be applied locally to the genito-urinary organs by a very simple procedure. The box in which the apparatus is packed has a false bottom, and when the box is turned upside down an opening is left, over which the patient may sit. The box is elevated by means of iron legs, which are fastened in the corners.

The apparatus is also supplied with a kettle, which for the purposes of heating water takes the place of the boiler.

As a whole, the apparatus is ingenious, efficient, compact, and calculated to serve a great variety of useful purposes.

SOME NEW AURAL INSTRUMENTS.

By SAMUEL SEXTON, M.D.,

NEW YORK.

The myringotome in use at the present time is sometimes found to be unsatisfactory, it being difficult to make with it a free opening; for, as soon as its point is made to prick the membrana tympani, the patient is unable to resist the desire to remove his head quickly away from the instrument. There is another objection to the needle or lance-shaped myringotome referred to: it may, after perforating the membrane, inflict a painful or injurious wound upon the posterior wall of the tympanum.

With a view to overcome these disadvantages I have devised an instrument, two sizes of which are shown in the cut Fig. 1 (A and B), full size.

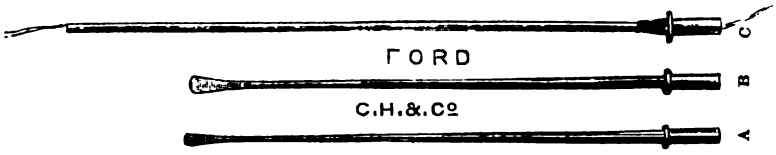

Fig. 1.

This myringotome, which is made of steel, with spring finish, I have used in a great many cases during the past year, and the favorable results of this experience justify me, I think, in offering it to the profession. The instrument does its work by being thrust gently, with a steady hand, against the membrane. The cutting edge is slightly rounded at the corners.

The surgeon having decided upon the size of the perforation required, an instrument is selected with a cutting edge to correspond. I have so far only required two sizes of this instrument, as shown in the cut. The larger one is two, and the smaller one is one and a half millimetres in width.

I have had the instrument made with the blue finish, so that its position can be more readily seen as it approaches the membrane through the polished speculum. From experience in using most ear instruments, I am convinced that a handle fixed at an angle of 110° answers the best purpose (an example of which is seen in Fig. 2).

In performing the operation of myringotomy with this instrument, the surgeon passes the cutting edge up to the membrane as near as possible without touching it, and then presses it quickly against and through it. The slight "pop," which resembles the sound attending the bursting of a light bladder-like substance containing air, assures the operator that the membrane has been perforated. It must be borne in mind, however, that the diseased membrane varies greatly in thickness and toughness, and consequently the pressure to be used varies in almost every instance. The instrument makes an opening of the exact size required, thus assuring precision in the operation.

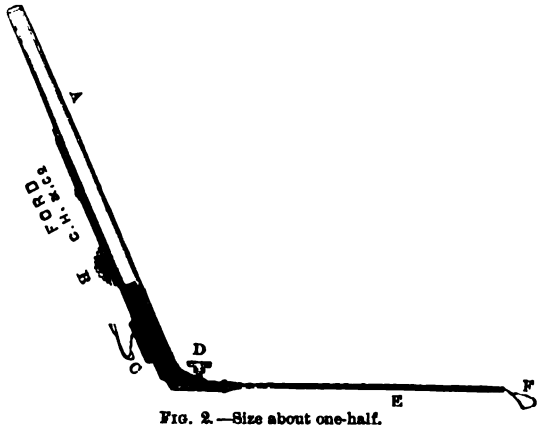

Fig. 2.—Size about one-half.

Figure 2 represents a new aural snare. The handle, A, of this instrument answers for the attachment of all the aural instruments which it is desirable to use in this way; it is made of ivory, and is well balanced when held in the hand. D is the set screw for making fast any instrument used.

When arranged for use as a snare, E is the canula, and F the wire snare. At C the wire is caught and held by a simple mechanism. B is a slightly elevated appliance which is milled to prevent the thumb slipping off when it is drawn down, and with it the wire of which the snare is formed. When used, the snare is held in the right hand, the thumb resting upon B. The snare F is to be passed over the polypoid growth the same as when using any of the snares which have heretofore been in use. The loop is now tightened over the growth to the extent required, by pulling down B with the thumb. It is believed that this instrument

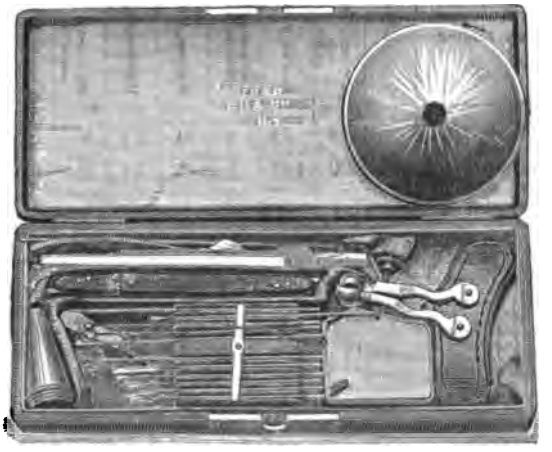

Fig. 3.—Size reduced.

will be acceptable to those who wish to carry a snare with other instruments in a small compass. The con-

trivance for holding the wire prevents its slipping during an operation, which sometimes is a great annoyance to those using the instruments as at present constructed.

Figure 3 represents a new aural pocket-case containing the above-mentioned instruments, together with others needful to have in most instances where a pocket-case is used. It contains the general handle; aural snare; bent forceps of delicate pattern; two bistouries (in one handle) for mastoid or other abscesses; small, sharp-pointed knife; small, round pointed knife (both for use in the meatus externus); curettes; probes; myringotomes; head-band and reflecting mirror (the mirror can be held in the general handle if not worn on the forehead); set of Wilde's specula, four sizes; vulcanite cotton-wool carrier, etc.

The case is 17 centimetres long, 7 centimetres wide, and 2 centimetres thick. It can be carried in a waistcoat pocket without inconvenience.

These instruments have been made by Mr. FORD, of Caswell, Hazard & Co., New York.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 10 *to November* 16, 1878.

TILTON, H. R., Major and Surgeon. Leave of absence extended two months. S. O. 245, A. G. O., Nov. 12, 1878.

KING, J. H. T., Captain and Asst.-Surgeon. Assigned to duty at Fort McIntosh, Texas. S. O. 238, Dept. of Texas, Nov. 8, 1878.

FINLEY, J. A., 1st Lieut. and Asst.-Surgeon. Relieved from duty at Fort Elliott, Texas, and assigned to duty at Fort Wallace, Kansas. S. O. 203, Dept. of the Missouri, Nov. 6, 1878.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 16, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Nov. 9, 1878.	1	14	72	1	1	45	0	0
Nov. 16, 1878.	0	23	107	2	2	41	0	0

OFFICE SURGEON-GENERAL U. S. MARINE HOSPITAL SERVICE. WASHINGTON. D. C., Nov. 16, 1878.

NATIONAL QUARANTINE REPORT.—Abstract of sanitary reports received during the past week under the National Quarantine Act:

New Orleans, La.—For the week ending yesterday evening there were 11 deaths from yellow fever. Impossible to procure accurate number of new cases. No new cases or deaths for the past twenty-four hours.

Clinton, La.—The first case of yellow fever occurred Sept. 7th. Among the white population there have been 40 cases and 15 deaths; among the colored people, 56 cases and no deaths.

Morgan City, La.—12 new cases of yellow fever and one death during the last week.

Delphi, La.—The first case of yellow fever occurred in August. Total cases to date, 100; deaths, 50. Both physicians died early.

Mobile, Ala.—There were 21 new cases of yellow fever during the past week and 8 deaths.

Vicksburg, Miss.—There were 4 new cases of yellow fever and 3 deaths during the past week. For the same period there were 8 cases and 2 deaths in the surrounding country.

Pass Christian, Miss.—Three new cases of yellow fever during the last week; no deaths. The last case occurred on the 10th, and the last death the 3d inst.

Chattanooga, Tenn.—Two new cases of yellow fever and 2 deaths during the past week. Last case and last death occurred on the 10th inst.—both colored.

Osyka, Miss.—The first case of yellow fever occurred July 31st. Total number of cases to date, 227; total deaths, 30.

Moscow, Miss.—Population, 185. First case of yellow fever Aug. 31st; last case Nov. 3d. Total cases, 71; deaths, 35.

McComb, Miss.—First case of yellow fever Sept. 28th. Total deaths to date 21.

Lake, Miss.—To Nov. 1st there had been 300 cases of yellow fever and 86 deaths.

Canton, Miss.—Total cases of yellow fever to Nov. 1st, 919; deaths, 176.

Port Gibson, Miss.—To Nov. 5th there were 655 cases of yellow fever and 116 deaths.

Havana, Cuba.—16 deaths from yellow fever and none from small-pox for the week ending Nov. 9th.

Baltimore, Md.—For the week ending Nov. 9th the average annual rate of mortality in 1,000 of the population, based on the weekly mortality, was 14.3. The deaths include 6 from diphtheria, 5 from enteric, and 3 from scarlet fever.

Boston, Mass.—The average annual rate of mortality for the week ending Nov. 9th was 17.5 per 1,000. There were 16 cases of scarlet fever and 3 deaths; 16 cases of diphtheria and 8 deaths.

Brooklyn, N. Y.—For the two weeks ending Nov. 9th there were 5 cases of enteric fever and 2 deaths; 41 cases of scarlet fever and 2 deaths; 81 cases of diphtheria and 36 deaths.

Burlington, Vt.—For the month ending Oct. 25th the average annual rate of mortality was 7.5. There were no deaths from preventable diseases.

Charleston, S. C.—For the week ending Nov. 9th there were 25 deaths from all causes, including 2 from enteric fever and 1 from diphtheria.

Chicago, Ill.—Average annual death-rate 14.7 for the week ending Nov 2d. There were 13 deaths from diphtheria, 4 from scarlet fever, and 7 from enteric fever.

Cleveland, Ohio.—In the week ending Nov. 9th there were 45 cases of diphtheria and 20 deaths; 2 deaths from enteric fever, and 4 cases of scarlet fever —no deaths.

Lansing, Mich.—The deaths for October show an annual death-rate of 7 in 1,000 of population; no deaths from preventable diseases.

New Haven, Conn.—For the week ending Oct. 9th there were 22 deaths from all causes, including 2 from diphtheria.

New York City.—The average annual mortality rate for the week ending Oct. 26th, was 21.4 per 1,000. The deaths include 11 from scarlet fever, and 18 from diphtheria.

Philadelphia, Pa.—For week ending Nov. 9th, the rate of mortality was 16.3. The deaths include 10

from diphtheria, 7 from scarlet, and 9 from enteric fevers.

Richmond, Va.—The average annual rate of mortality was 15.79 for week ending Nov. 9th. The deaths include 2 from scarlet fever, and 1 from diphtheria.

Rochester, N. Y.—For the month of October, the average annual rate of mortality was 12.16 per 1,000. There were 2 deaths from diphtheria, and 1 from scarlet fever.

Toledo, Ohio.—During the month of October there were 3 deaths from diphtheria, and 3 from scarlet fever. The average annual death-rate was 13.68 for all deaths.

Milwaukee, Wis.—For the three weeks ending Nov. 9th, there were 61 cases of diphtheria and 14 deaths, 14 cases of scarlet fever, and no deaths; there were 3 deaths from typhus fever, and 3 from enteric fever.

Rio de Janeiro, South America.—For the two weeks ending Oct. 12th, there were 227 deaths from small-pox, 3 from typhus fever, 10 from enteric fever, 4 from yellow fever, and 18 reported from "pernicious fever." Deaths from all causes show an average death-rate of 43.5.

Great Britain.—In twenty large cities and towns of *England*, having a population of seven millions, the deaths for the week ending Oct. 26th show an annual rate of mortality of 21.6 per 1,000 of the population. The deaths include 5 from small-pox, 187 from scarlet fever, and 71 from other fevers. In *Dublin*, for the same week, the mortality rate was 23.5. There were 5 deaths from small-pox, and 8 from scarlet fever. In Belfast, for the week ending Oct. 31st, there were 9 cases of scarlet fever and one death, 3 cases of enteric fever, but no deaths.

Stockholm, Sweden.—For the week ending Oct. 12th, the total mortality shows an average annual rate of 17.3. Enteritis and diarrhœa caused one-fifth of deaths.

Christiana, Norway.—For the week ending Oct. 19th, there were 3 deaths from diphtheria, and 1 from scarlet fever. The average annual rate of mortality was 13.8 in 1,000 of the population.

German Empire.—During the week ending Oct. 19th there were 5,475 births, and 3,480 deaths in 149 cities and towns of 15,000 people and upwards, having an aggregate population of 7,439,708. The average annual death-rate per 1,000 of the population was 24.3; the lowest being 11.5, at Potsdam; the highest 37.9, at Augsburg. In *Berlin* the death-rate was 27. The total deaths include 113 from scarlet fever, 169 from diphtheria and croup, and 70 from enteric fever. There were no deaths from small-pox or typhus fever.

The "Rinderpest" is reported to be decreasing in some of the provinces of Turkey.

China.—Advices from *Shanghai* to Oct. 1st report only sporadic cases of Asiatic cholera at that port. Cholera first appeared in China in 1820, having been brought by sea from Siam, and has proved very malignant at times, although at no time ravaging an extensive region of country. Sporadic cases occur at Shanghai in the summer and autumn of almost every year. All persons visiting China and Japan are advised to be re-vaccinated before going. The universal practice of inoculation with small-pox virus, which obtains in those countries, accounts for the frequent deaths among foreigners from small-pox. Inoculation does not always protect from subsequent attack. *Diphtheria* is not common in Shanghai. It is restricted almost wholly to higher latitudes of the Empire. *Yellow fever* is unknown in Eastern China. Typhus fever often prevails, but generally over restricted areas. *Leprosy* prevails to some extent in the province of Canton, which furnishes nearly all the Chinese emigrants to the United States. The disease was introduced into the Sandwich Islands from China.

Singapore.—The island and part of Singapore are reported free from all epidemic or infectious diseases —advices to Sept. 27th.—JNO. M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

THE THIRTY-SECOND ANNIVERSARY DISCOURSE BEFORE THE NEW YORK ACADEMY OF MEDICINE will be delivered by Prof. W. H. Thomson in the Hall of the Academy, 12 West 31st Street, on Wednesday evening, Nov. 27, 1878, at 8 o'clock. The medical profession are invited to attend.

ST. FRANCIS' HOSPITAL, NEW YORK.—Dr. George F. Shrady has been appointed Attending Surgeon to St. Francis' Hospital, New York.

PROF. MOSES GUNN, of Chicago, who has been suffering from a poisoned wound, received during operation, is now rapidly improving.

NEW YORK ACADEMY OF MEDICINE.—The Library of this association now numbers seven thousand volumes, while nearly fifty of the leading medical journals of this and other countries are laid upon the tables for the free use of the medical profession and the public. The Library is open from 10 A.M to 5 P.M., Sundays excepted.

STATE WOMAN'S HOSPITAL.—Dr. Fordyce Barker has resigned his position as one of the surgeons to the New York State Woman's Hospital. Pending the election to fill the vacancy thus created, the staff was enlarged by two additional members. The following were then elected surgeons to the institution: Drs. C. C. Lee, James B. Hunter, and E. Noeggerath.

A CASE OF OVARIOTOMY—RECOVERY.—Dr. W. E. Rowe, of Waterville, Iowa, sends the following account:—"Some time in March, 1878, Miss B., German, unmarried, aged 23, noticed that her abdomen began to enlarge, and that her previous good health began to fail. Several physicians were consulted in regard to the case, and it was pronounced to be either an ovarian tumor or an extra-uterine pregnancy. Nothing was done, except some medicine given to improve digestion and to regulate the bowels. Her abdomen continued to enlarge, and Dr. T. H. Barnes was consulted. After a thorough and careful examination he unequivocally pronounced it to be an ovarian tumor, and its immediate removal by ovariotomy was recommended, as the tumor was already causing considerable gastric derangement, and also, by pressure on the diaphragm, seriously interfering with respiration. The diagnosis being established beyond a doubt, and the operation decided upon, on Wednesday, September 18, 1878, Dr. Barnes, assisted by Drs. Brown, Earle, Behle, Rogers, and Rowe, removed a large, solid, multilocular ovarian tumor, weighing twelve pounds. *Operation*—The patient being thoroughly under the influence of chloroform, an incision was made in the linea alba, extending from the umbilicus to the pubis, and the tumor exposed. All hemorrhage was stopped by searing the wound with the galvano-caustic battery. On opening the cavity of the peritoneum a quantity of water escaped, showing the presence of ascites. The tumor being fully exposed, cysts were looked for, and a small one found, which was tapped, and about ℥x. of clear fluid drawn with the expirator. Adhesions were next

looked for, and a few found, but they were easily broken up by the hand. On trying to turn the tumor out of the cavity it was found impossible to do so, and the incision had to be lengthened, making it about seven inches in length. The tumor was now rolled out and found to be attached to a very short and broad pedicle, consisting of the broad ligament and Fallopian tube. A Wells' clamp was applied, and the tumor removed with the knife. One small artery was ligated in the stump of the pedicle. The wound was sponged out with a carbolic solution, and then closed with five carbolized silk sutures. The sutures included the peritoneum. A cloth smeared with simple cerate was laid over the wound and a flannel bandage applied. The patient bore the operation well, and rallied nicely. The subsequent treatment consisted in keeping the temperature of the room at about 60° F., and the usual antiseptic and opiate treatment to guard against peritonitis.

"The above case is interesting, owing to the very rapid growth of the tumor, and the nicety of diagnosis required to discriminate between an extra-uterine pregnancy or ovarian tumor. There was no history of any previous ovarian disease. She had menstruated regularly since puberty. The entire left ovary was involved. It was feared that the rapid growth of the tumor was owing to carcinoma, but nothing of the kind presented itself. The failure of the battery to work properly prevented its use on the pedicle. This adds another to the list of successful cases of ovariotomy."

To Prevent Suicide.—The International Medico-Legal Congress opened August 12th, in the Palace of the Tuileries, Paris. In relation to the prevention of suicides, M. Jeannel proposed, as the only means, in his opinion, to diminish their number, was to give the bodies of suicides to the anatomical amphitheatres.

Ergot in Cardiac Diseases.—Massini recommends ergot in simple hypertrophy and cardiac degeneration, when digitalis administered for some time produced no effect. In valvular troubles ergot appears to have but little effect. He prefers the preparation obtained by maceration.

A Self-Generating Disinfectant. — Dr. John Day, of Geelong, Australia, recommends the following: One part rectified oil of turpentine, seven parts benzine; add a few drops oil of verbena. Each of these agents has the power of absorbing oxygen from the air and converting it into peroxide of hydrogen, a highly active oxidizing agent, very similar in nature to ozone. This preparation is cheap, lasting, easy of application, and does not injure fabrics of any kind. It may be applied with a brush or sponge, or by sprinkling or pouring over articles. It is very efficient, besides the odor is not disagreeable.

Thymol dressing of wounds is considered vastly inferior to the carbolic dressing of Lister. Dr. Robert F. Weir (*Ohio Med. and Surg. Jour.*, June, 1878) has tested it in the New York and Roosevelt Hospitals, and has found it inferior in every way. He says that at the recent meeting of the Surgical Congress of Berlin, Drs. Custer, of Berlin, Olshausen, of Halle, Schede and Langenbeck, of Berlin, spoke against it. He intimates that *carvol* (from carraway seed) may prove the coming antiseptic.

High Temperature Before and After Death from Yellow Fever.—Dr. C. S. Mercier reports (*New Orleans Medical and Surgical Journal*, Sept., 1878) the case of a German woman who was admitted to the Charity Hospital with well-marked symptoms of yellow fever, and who died a few hours afterward. Two hours before death the temperature in the axilla was 111° Fahr. At the time of the autopsy, five hours after death, a thermometer placed in the axilla indicated 105.5, and another in the hypogastric region, after an incision had been made through the abdominal walls, recorded 109° F.

A Large Dose of Chloral.—Dr. Henry Tizard details (*British Medical Journal*, Sept. 21st) a case of recovery after the injestion of *one hundred and sixty grains of chloral* with suicidal intent.

Rectal Abscess.—Verneuil recommends, in opening abscesses around the verge of the anus, that the operation for *fistula in ano* should be performed at the same time.

The Effects of the Use of Quinine on Hearing.—The belief is general among the laity that the prolonged use of quinine affects the hearing. Medical men have generally disbelieved this, and attributed the notion to prejudice. Dr. Roosa, of New York, has been examining the evidence, such as he can procure, and is inclined to believe that in some cases there is a permanent nervous affection of the ear produced, which justifies the opinion of the laity.

Alcoholic Drinks in England.—In spite of the commercial distress, that prevails throughout England and Scotland, it has been ascertained that the consumption of spirituous drinks in those two countries last year exceeded that of the preceding year, when it amounted to 600,000 gallons.

A Remedy for Obesity.—Prof. Dr. Tarnier has called attention (in *Am. de la Soci. de Méd. de Gand.*, No. iv., 1877) to the success of a milk diet in cases of obesity. He lays down the following regimen: 1st day, three-quarters of usual food and one litre of milk; 2d day, half usual diet and two litres of milk; 3d day, one-quarter usual diet and three litres of milk; thereafter, four litres of milk daily and nothing else. Once in a while allow a little solid food to prevent disgust for milk. If diarrhœa occur, suspend milk diet for a while, then resume. Success always attends, entailing no dangers.

Insomnia. — In cases of *insomnia* from anxiety, melancholia, or a low state of nutrition, camphor will act favorably, when chloral, morphia, potassium, bromide, etc., fail. One and a half to two or three grains may be subcutaneously injected after dissolving in almond oil.

Anti-Toothache.—The following is far superior to simple creosote, acid carbonate, oil of cloves, morphia, chloroform, etc.:

℞. Chloroformi pur.,
Tr. aconite rad. (Fleming)... aa fl. ʒ iij.
Tr. capsici..... fl. ʒ i.
Tr. pyrethri,
Ol. caryoph.....aa fl. ʒ ss.
Gum. camph..... ʒ ss.
M. Apply on cotton-wool.

Ladies' Heels.—Dr. Kraussold has recorded two cases of severe pain in the knee-joint and leg, with impossibility of complete extension at the knee-joint, and contraction of the muscles on either side of the popliteal space, which were due to the new-fashioned heels now worn on ladies' shoes.

Prof. Rokitansky, recently deceased, performed 30,000 autopsies.

Original Lectures.

LECTURES ON CLUB-FOOT.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK (SPECIAL COURSE).

BY JOS. C. HUTCHISON, M.D.,

VISITING SURGEON TO THE BROOKLYN CITY HOSPITAL; SURGEON-IN-CHIEF TO THE BROOKLYN ORTHOPÆDIC INFIRMARY; CONSULTING SURGEON TO THE KINGS COUNTY, ST. PETER'S AND ST. JOHN'S HOSPITALS, ETC.

LECTURE I.

INTRODUCTORY AND HISTORICAL REMARKS—REUNION OF TENDONS AFTER SUBCUTANEOUS TENOTOMY, AND RULES FOR THE OPERATION—DIFFERENCE IN THE NORMAL ANATOMY OF THE INFANT AND THE ADULT FOOT—VARIETIES OF CLUB-FOOT—CONGENITAL AND NON-CONGENITAL TALIPES—FREQUENCY—CAUSES—COMPLICATIONS—PROGNOSIS—TALIPES VARUS (CONGENITAL)—DEGREES OF THE DEFORMITY—TREATMENT—AGE AT WHICH IT SHOULD BE COMMENCED WITHOUT AND WITH TENOTOMY—NON-CONGENITAL TALIPES VARUS—PROGNOSIS—TREATMENT.

GENTLEMEN:—In a brief course of lectures, I desire to call your attention to the surgical treatment of that class of deformities or malformations which is commonly expressed by the term club-foot. In doing so, I shall open to you a much-neglected, but (humanely speaking) one of the most attractive chapters of modern surgery. I say "modern surgery" purposely, for it is important for you, on many accounts, to know that this department of orthopædic surgery, as well as some others which will be mentioned by other instructors, is much younger than the present century. Our older surgeons readily recollect the modest beginnings of their practice of the division of tendons, and even those who do not consider themselves old well remember to have seen deformed persons, who, through a long life, have borne without hope the miseries attendant on unrelieved club-foot, which in earlier years might easily have been cured. It was not until 1816 that the eminent surgeon, Delpech, began this procedure with hesitation and with indifferent success. In this connection I will ask you to fix in your memory, as one of the pioneers of your art, the name of this surgeon of Montpellier, who, if he had lived out the ordinary space of life, would have left a name not easily forgotten for originality of thought and ingenuity of execution. As it was, he left a book, "De l'Orthomorphie," printed in 1828, which contains statements of principles and rules for practice that are quoted by every systematic writer on this subject down to the present day. His four rules for subcutaneous tenotomy, somewhat modified by the progress since made, are followed by the orthopædic surgeons of to-day. It is true that before Delpech tendons had occasionally been divided by veterinary surgeons, as well as for the relief of club-foot, but not subcutaneously, so that it was reserved for that surgeon to give to the operation a recognized and legitimate place in surgery. In 1831, Stromeyer of Hanover improved upon Delpech by the use of a small bistoury, thus avoiding the danger of a large external wound. Stromeyer's cases too were almost uniformly successful; so that, with the publication of his experience in 1834, tenotomy may be said to have gained footing on solid ground. Tenotomy therefore, you will observe, has not quite completed its first half century. After Stromeyer, the operation was rapidly adopted by the best surgeons of Europe and America; by some improved and simplified, principally (1) by the adoption of the rules that the section should be subcutaneous, that is to say, the surgeon avoids a counter-opening on the further side of the subsected tendon, while making as small an incision as possible at the point of entry of the narrow-bladed knife, and (2) by making the incision in a valvular form, *i.e.*, the integument is slid somewhat to one side as the knife is entered, so that, when the knife is withdrawn, the wound through the skin does not exactly correspond with that in the deeper parts. This step, it is believed, tends to prevent the admission of air into the inner wound, thereby avoiding some of the chances of inflammation and suppuration which may follow the presence of air in the deeper tissues, and interfere with the proper union of the tendon. I will not now demonstrate the manner in which the operation of tenotomy is ordinarily performed, because I shall have occasion to do so at a future time.

In this country, the tendo Achillis was first divided according to the Stromeyerian method by the late Dr. James H. Dickson, in 1835. Thus you may learn how slow has been the recognition of this valuable operation, which already has been performed many thousands of times. It is a simple operation, easy of performance, comparatively free from danger, from blood-loss, or any disagreeable after-effects. It causes but little pain, and generally brings about a cure after a short period of confinement.

RULES FOR THE OPERATION OF SUBCUTANEOUS TENOTOMY.

Let us now see what takes place when a tendon is thus cut, and how tendons reunite. But first I will describe the manner in which the operation of tenotomy is ordinarily performed. The limb should be so held that the tendon to be divided is made to stand out prominently; the skin is slid to one side, and the tenotome is carried beneath the tendon flatwise; the cutting edge is now turned towards the tendon which is to be divided transversely towards the skin, by alternately raising and depressing the handle, without puncturing the skin on the opposite side. After a tendon has been divided, pressure should be made along the track of the instrument as it is withdrawn, in order to exclude the air and prevent extravasation of blood into the subcutaneous tissues. The wound should be immediately closed by a compress of lint, retained in position by a strip of adhesive plaster and a "figure-of-eight" bandage around the foot and ankle. The foot should then be put into a plaster-of-Paris or felt splint, which has been accurately moulded to it before the operation, in the manner I shall hereafter show you. It is thus kept at rest in the deformed position until the puncture has healed, which usually requires about four days. To straighten the foot immediately after the operation would tear open the wound, and most likely bring on suppuration. On the other hand, if we wait too long, we lose all the advantages to be expected from tenotomy.

The tenotomy knife should have the shape of the ordinary blunt tenotome, the extremity being sharp instead of blunt. With this instrument there is less danger of making a second puncture than with the more pointed instrument.

REUNION OF TENDONS AFTER SUBCUTANEOUS TENOTOMY.

When the tenotomy is properly performed, the sheath of the tendon commonly remains intact, except

at the point at which the knife enters. The tendon itself is, however, completely cut across, and the divided structure retracts; the one end separates from the other. The amount of retraction will, of course, vary considerably according to the size and power of the muscle, the degree of deformity to be overcome, or the amount of forcible motion that may then or later be made at the joint. Taking the tendo Achillis for an example, this retraction is ordinarily from one-half an inch to one inch in children, one to two inches in adults. The tendon is a very slightly vascular tissue, hence there is but little, if any, effusion of blood within the sheath after tenotomy. It is the exception rather than the rule for even the largest tendons to bleed appreciably. Mr. Broadhurst, who has made numerous experiments for the purpose of studying the progress of reunion, says that on the second day "a small and unimportant film of blood was found in the sheath, and a small quantity of lymph was attached to the divided end." Billroth is nearly the only writer who makes mention of hemorrhage, and he merely says it *may* be sufficiently abundant to hinder, and even prevent, the process of reunion. The space between the ends is filled by the effusion of a grayish lymph. This exudes from both ends, but more abundantly from the upper end. On the fourth day the two ends are joined by a soft bond of union by means of this lymph. On the sixth day it becomes a well-defined, firm, and ruddy cord, and has assumed a distinctly fibrous character. This is the beginning of a process of repair, which, in the end, forms a structure that is histologically identical with that of the original tendon (Paget). As the repair advances the tissue increases in quantity; it hardens and matures, loses its plastic and cellular quality, and takes on a new and more fibrous character, and after a few months it assumes almost exactly the appearance of the old tendon. The microscope is then unable to discriminate between the old and the new. The gross appearances are very nearly the same as to outline, surface, size, and strength; only in color is a difference recognizable. The new tendon is more grayish in hue, and has a less pearly lustre than the original tendon.

RATE OF EXTENSION AFTER TENOTOMY.

Although this new material is soft at first, it rapidly strengthens, so that in from thirteen to twenty days it becomes sufficiently strong to sustain the weight of many pounds. It is susceptible of extension to any degree required for the relief of deformity, even for weeks. On this account it is well not to undertake too rapidly the removal of extreme deformities; but it is wiser in certain cases to continue a gradual extension during a period of from two to three weeks, or even longer, in paralytic cases, and in persons of feeble health. It should be remembered, and I desire to emphasize this point, that force may be prematurely applied in such a way as to ruin the result by causing the ends of the tendons to be drawn so far apart as to render reunion impossible. This was done when the operation was less understood. In such a case a deformity, the opposite to that already existing, is produced. It is not sufficient simply to remove the malposition caused by a shortened tendon or muscle. The restoration of function must be held in view, and, of course, all power to do this is lost if an important muscle is permanently severed from its point of insertion. Rest after tenotomy should be allowed the limb for a period of from four to six days, rather longer in adults than in infants. Extension of the newly forming band or bands of connecting tissue should then begin gradually. Immediate extension has been recommended, but, for reasons already given, gradual extension, covering a period of two or three weeks, appears to offer the best prospects of success. The deposit of new material will thus be held under control, and the new tendon will not be put unduly on the stretch. Mr. William Adams advises that in the atrophied limbs of paralytic patients the efforts at restoration to a normal position be continued, little by little, for not less than five or six weeks.

DIFFERENCE IN THE NORMAL ANATOMY OF THE INFANT AND THE ADULT FOOT.

In order that we may understand the physiology and pathological anatomy of the child's foot, it is important for us to study its normal anatomy, which differs materially from that of the adult. It is all the more important to direct your attention to this matter, because the text books, as well as the lectures on orthopædic surgery hitherto published, are silent upon this subject. The plates and the descriptions of the foot which they contain relate only to the adult foot. With the exception of the pelvis and the pelvic organs at puberty, there is no part of the body that undergoes greater anatomical and physiological changes than the human foot from birth until the eighth year. A comparison of the foot of the child with that of the adult is therefore important.

The foot comprises all that part of the lower extremity situated below the tibio-tarsal articulation. The orthopædic surgeon is principally interested in the superior and inferior surfaces, as a deviation from their normal outline marks the degree and direction of the deformity. The adult foot is in the form of an arch, convex above and concave below. The superior surface at its highest point, formed by the astragalus, receives the whole weight of the body transmitted to it through the tibia and ankle-joint. The inferior surface transmits the weight to the ground. The convex form of the superior surface gives great freedom to the movements of the leg, and, in connection with the marked flexibility of the organ, admits of great changes in the direction of its long axis, and in the position and direction of the centre of gravity; while the concave form of the inferior surface and the number of bones that enter into its formation give it flexibility and strength, allowing it to accommodate itself to all the irregularities of surface with which it is brought in contact. The inferior surface is also marked by a double arch; the first and most important extends from the heel to the ball of the great and little toes; the second, extending laterally, is formed by the scaphoid, cuboid, and cuneiform bones, and reaches to the tarsal extremities of the metatarsal bones (Fig. 1.). The points of pressure when the foot is applied to the ground are the posterior inferior extremities of the os calcis and the anterior inferior extremities of the metatarsal bones of the great and little toes.

In the infant the conditions are very different. The inferior surface of the foot is flat, or nearly so, the arch hardly perceptible (Fig. 2). The convexity of the superior surface is scarcely marked, for the tissues are soft and abundant and adapted to bring to it the greatest amount of nutrition. At birth, and for some time subsequently, the feet are adducted and turned inward, so that their inferior surfaces look towards each other, and the inner ankle is scarcely observable. This condition continues during the movements of flexion and extension, and if we attempt to place the child on its feet, the outer border first touches the ground. This is not a deformity; it is a normal condition that changes with development.

The feet are now unfit to support the weight of the body, as they are not yet sufficiently developed for that purpose. The bones that are destined to become solid and firm are rudimentary, cartilaginous; few of them have more than a single point of ossification, and they are connected merely by soft bands which will ultimately become powerful and elastic ligaments. This is not the foot that is described in the text-books, the foot that is ordinarily capable of supporting a body weighing one or two hundred pounds, and under extraordinary circumstances, as in leaping and jumping from heights, sustaining without inconvenience a pressure equal to many hundreds of pounds. Guéniot has pointed out the following method of determining whether the inversion of the foot which exists at birth is a normal or pathological condition. Hold the child under the arms, and turn its back to an open fire, it immediately flexes the thigh on the trunk and the legs upon the thighs, and turns the feet outward, the sole towards the heat. This last movement cannot be accomplished if the feet are deformed.

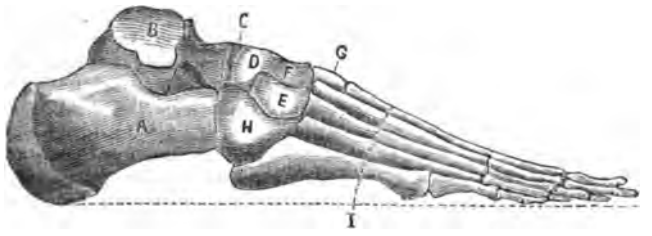

FIG. 1.

FIG. 2.

FIG. 1.—Foot of adult: A, os calcis; B, astragalus; C, transverse tarsal joint; D, scaphoid; E, external cuneiform; F, middle cuneiform; G, internal cuneiform; H, cuboid; I, metatarsal bones.
FIG. 2.—Feet of the infant.

The astragalus may be considered the most important of all the bones of the foot, and it is the first to assume definite form. The os calcis, on the contrary, undergoes a much more marked change; in the infant the anterior part is long and the tuberosity unusually small. (Figs. 3 and 4.) The tuberosity extends but little beyond the posterior border of the astragalus, and the groove in which the astragalus moves has little depth. The apophysis is hardly perceptible, the under surface is almost flat, and the height, particularly on the inner border, is extremely low as compared with the other dimensions of the bone. This condition is hardly changed at two years.

The movements of the foot are not the same in the infant as in the adult. In the infant, flexion and extension are much more restricted, while adduction and rotation inward of the sole is much greater than in the adult. This is due in a measure to the laxity of the ligaments, but the difference in the conformation of the articulating surfaces exercises by far the greatest influence. As the individual becomes older, and the

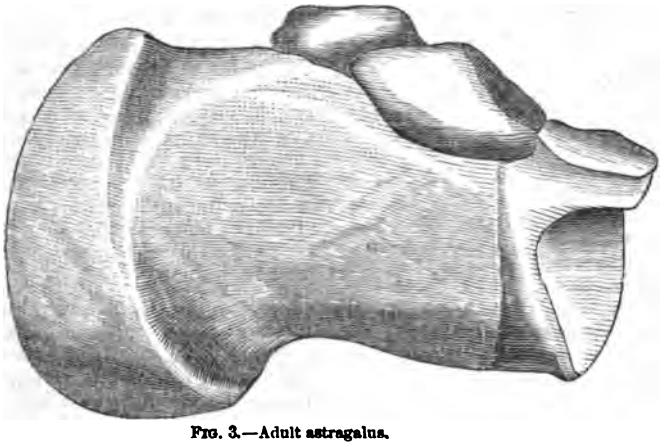

FIG. 3.—Adult astragalus.

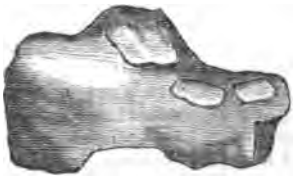

FIG. 4.—Astragalus of infant.

The size of the foot, its length and breadth, is greater in the infant in proportion to its height, than in the adult, and the whole foot is larger in proportion to the size of the body. The part of the foot anterior to the tibio-tarsal articulation attains its normal shape and development much earlier than the posterior part. The foot increases in length more rapidly on the inner than on the outer side, and it is owing to this fact that the sole is gradually turned outwards. These changes are the result of alterations that take place in the different bones of the foot during growth, and the progress of ossification; they are much more marked at four, and about the eighth year all the bones have assumed their normal proportion.

articulating surfaces assume a more vertical direction, the movements of adduction and version of the foot inward are greatly diminished, and at eight years the movements are precisely those of the adult.

VARIETIES OF CLUB-FOOT.

From the earliest periods four varieties of club-foot have been recognized. They are designated respectively: *Talipes varus*, when the foot is adducted and the sole turned inward; *Talipes valgus*, when the foot is abducted and the sole turned outward; *Talipes equinus*, when the foot is forcibly extended, the heel being elevated and the sole turned backward; and lastly, *Talipes calcaneus*, comprising those cases in which the

foot is strongly flexed, the sole being directed forward. But beside these simple forms, four compound varieties are met with, namely: *Talipes equino-varus; Talipes equino-valgus; Talipes calcaneo-varus*, and *Talipes calcaneo-valgus*. All these forms of club-foot are beautifully illustrated in the casts before you, most of which were taken from cases occurring in the practice of Dr. Detmold, Emeritus Professor of Clinical and Military Surgery in this institution. Although he was not, I believe, the first to perform tenotomy in this country, we are certainly indebted to him for the earliest impulse to orthopædic surgery in the United States. His monograph on club-foot, long since out of print, attests his professional ability, and his enthusiasm in this department of surgery.

It is to be observed, gentlemen, that all the varieties of talipes present one common characteristic, viz.: the deviation of the plantar surface from the normal position, and by no amount of force can the whole plantar surface be brought in contact with a horizontal plane. This condition depends chiefly on a change of relation between the astragalus and the bones with which it is connected.

CONGENITAL AND NON-CONGENITAL TALIPES.

Each of the varieties of club-foot may be either of congenital or non-congenital origin, the latter being by far the more frequent. From statistics taken from the Maternity Hospital, at Paris, during a period of ten years, from 1858 to 1867 inclusive, it is shown that there were 15,229 births, 8 being born with club-foot; one case of club-foot for every 1,903 births. ("Lannelongue on Congenital Club-foot," Paris, 1869.) Mr. Tamplin gives the following statistics to show the relative frequency of club-foot to other deformities, and the comparative frequency of congenital and non-congenital cases: Of 10,217 cases of deformities of all kinds treated at the Royal Orthopædic Hospital, London, 1,780 were cases of club-foot; 764 were congenital, and 1.016 were non-congenital. The proportion of congenital to non-congenital being as three to two ("Adams on Club-foot"), the question, whether the deformity is congenital or has been acquired after birth, is of great importance; for although the treatment is similar, the prognosis, both as regards the duration of the treatment, and the ultimate usefulness of the foot after the removal of the deformity, is much more favorable in the congenital than in the non-congenital variety. It is necessary, therefore, to distinguish between the two forms, and in young subjects this is easily done. The difference in the external appearances of the two classes of cases is strongly marked; but in adults there is often great difficulty in deciding the question, for the reason that the characteristic features of the two varieties become effaced when the child has walked upon the foot for a long time.

I will now mention a few salient points which will aid us in making a differential diagnosis. In congenital club-foot, before the child is old enough to have walked much, the muscles retain their normal size and characteristics; the toes can be flexed, there is some mobility of the ankle-joint, but the foot is quite rigid, owing to the adapted shortening of the ligaments. On the sole of the foot there is, in cases of varus, a transverse depression corresponding with the medio-tarsal joint. There are also marked irregularities on the dorsum of the foot, due to the distortion of some of the tarsal bones, and the temperature and color of the skin is unchanged.

In non-congenital club-foot there is, from the first, a tendency to atrophy and fatty degeneration of the muscles of the leg. The toes are permanently flexed; the great toe is, however, sometimes in a state of forced extension, so severe that it cannot be flexed; the temperature is diminished and the skin is of a bluish color. In cold weather patients frequently suffer from chilblains; there is an absence of marked rigidity of the foot, which obtains in congenital cases, and instead of the permanent irregularities noticed on the dorsal surface in congenital cases, the foot, in the non-congenital variety, presents a generally rounded and smooth external surface.

In old cases, when the child has walked on the foot for some time, the distinctive features of congenital and non-congenital club-foot are less marked. The muscles of the leg in the congenital form, from want of use, become gradually atrophied, but there is no considerable structural degeneration as in the non-congenital, and the movements of the foot, in both varieties, are greatly restricted. Owing to the diminished vitality of the parts, non-congenital cases suffer considerably from irritation of the cushions on which they walk, and great inconvenience and pain are experienced in walking, on account of the relaxed condition of the ligaments. Still, the extremely wasted and paralytic condition of the limb, the diminished temperature and bluish color of the skin observed in the non-congenital variety, will materially aid in the diagnosis.

ATTITUDE AND EXPRESSION IN THE DIAGNOSIS OF SURGICAL DISEASES.

AN ABSTRACT OF A LECTURE DELIVERED BEFORE THE MEDICAL CLASS OF THE UNIVERSITY OF PENNSYLVANIA MEDICAL SCHOOL.

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(Reported for THE MEDICAL RECORD.)

THE VALUE OF ATTITUDE AND EXPRESSION OF A PART AS A MEANS OF DIAGNOSIS IN POTT'S DISEASE—COXALGIA—INFLAMMATION OF THE PSOAS MUSCLE—SYMMETRICAL COXALGIA—FRACTURE OF THE CLAVICLE—INTRACAPSULAR FRACTURE—RHEUMATIC ARTHRITIS—THYROID LUXATION OF THE THIGH-BONE—LUXATION OF THE THIGH-BONE ON THE PUBIC BONE—LUXATION OF THE HEAD OF THE FEMUR ON THE DORSUM OF THE ILIUM—DISLOCATION OF THE SHOULDER-JOINT—LUXATION OF THE ELBOW-JOINT—ARTHRITIS OF THE WRIST-JOINT.

A LARGE proportion of the injuries of the bony skeleton generally manifest themselves by some peculiarity in the position of the patient. By this statement I mean that if the patient is carefully watched, the lesion will reveal itself by the position which he assumes before any other visible signs of the condition appear. This leads me to speak of the attitude and form or expression of a part as an element in the diagnosis of surgical disease. By *form* or *expression* I mean the peculiar conformation of different parts of the body in health and disease. In health, the form of one side of the body is the same as that of the corresponding side. In disease, therefore, we always compare the diseased with the sound side. Every part of the body has an expression of its own in health and in disease.

The fact that the skeleton is fixed gives expression to the surface of the body. All our best references in surgery are drawn from points on the bony skeleton. In tying the axillary artery, for instance, at its first

part, we govern our incision by reference to the position of the coracoid process of the scapula. So, too, with regard to other operations on the body, we refer to bony prominences. In fracture of the lower part of the leg, we feel for the spine of the tibia, and see how it answers with the corresponding part on the opposite side.

Let me first take up the consideration of the subject with regard to certain conditions of the spine.

POTT'S DISEASE OF THE SPINE.

This is a tuberculous condition of an inflammatory character, and begins in the cancellated tissue of the vertebræ, producing great ravages and horrid deformity. This disease may lurk in the spine for a long time before it is discovered. If a careful examination is made, we can generally predict the approach of this disease. It is very prevalent in young children, from birth until they reach the age of fifteen. If the secret progress of this disease can be detected by any displacement, a cure can generally be effected without any serious disorganization. No matter how early it may be detected, however, there will always be some resulting deformity. I see almost every week cases of disease of the spine which have been entirely overlooked.

One of the symptoms whereby this disease may be detected in its early stage is a feeling of discomfort about the sides, attended with sudden spasms of pain; the child cries out suddenly, and then relieves the pain by lying down. Another symptom is grunting respiration, short, hoarse breaths. We may have this symptom without the presence of Pott's disease, but its presence should always awaken the suspicious physician. Then, again, we very frequently find a child with Pott's disease leaning over a table and complaining of a tired feeling. This symptom is often present, and when so, is one of great value. The muscles of the back are weary because they are not perfectly energized by the nerves which are compressed by the inflammatory deposits and thickenings at their roots. Then, again, I have often noticed a child with the prodromes of this spinal affection jump from a chair or sofa to the floor, and, lighting on its feet, seem for a time bewildered. If such a child walks about much, it does so with a great degree of uncertainty, and has a most peculiar gait—the shoulders are drawn up, concealing the neck, the arms are fixed rigidly and held away from the body. The patient does all this, and shuffles rather than walks along, to prevent all concussion of or shock to the spine.

In a month or so after the disease has begun, the surgeon will be able to detect little irregularities in the spinal processes.

The least twist of the spine brings on pain and discomfort. The child is therefore compelled to keep perfectly rigid, and when it stoops, does so by bending one limb and carrying the arm down, while the spine is kept perfectly stiff, in other words, squats. The trapezius muscle is in a constant state of spasm, and so the patient keeps the shoulder up. The scapula, too, must be, and is, held up, for if it were allowed to drop, it would drag on the spine. The presence of this sign seems generally to indicate disease in the upper part of the column.

If, in any instance, you find one or more of these symptoms coexistent with pain in the chest and colicky pains in the abdomen, you may, in most cases, be pretty sure that you have to deal with a case of Pott's disease of the spine.

COXALGIA—HIP-JOINT DISEASE.

This disease very often goes on to its second stage before it is detected. Treatment, if it is to be successful, must therefore be begun early. If treatment is begun early, we may get very excellent results.

Long before there is any marked deformity in this, as in Pott's disease, certain prodromic symptoms may be discovered. These symptoms, I say, are apparent before the hip affection is manifest.

The earliest sign is a certain posture assumed by the limb on the affected side. The patient stands in a peculiar way. He rests firmly on the sound limb, but not on the other. One limb is well nourished and rotund, the other is generally somewhat emaciated, and is advanced, carried forward, and flexed at the knee on the thigh, and at the thigh on the body. The foot is also everted. Another point is the change which may be noticed in the crease which separates the nates from the thighs. This crease is entirely gone on the diseased side.

The limb assumes the attitude which I have described above, on account of certain conditions due to the effusion in the joint. There is in all cases a synovitis—the initial lesion, if in the head of the bone, induces the synovitis. Coxalgia, in fact, never exists without synovitis. The serum in the joint requires room, and the patient places the limb in a position to give this effusion the greatest room. The natural position of the limb would give it no room at all. The amount of room is increased by flexing the limb at the knee and the hip, and turning the toes out. You can very easily verify this fact in the dissecting-room. To do this, you must bore a hole above the acetabulum in a sound limb, and inject water into the joint. The limb on the side where the joint has been thus injected will take the very position which it assumes in a case of coxalgia.

Another prodromic sign of the disease is the following: if a child is placed in the recumbent position, and if it is healthy, it is just possible to edge in the fingers between the child's loins and the plane upon which it is lying. To do this, of course, the child must be placed upon a table, or some flat surface, and its limbs well straightened out. If one of the joints, however, in such a child be diseased, the knees will be raised when the child is placed upon the table, and then, if they be thrust down, the whole fist can be introduced between the table and the loins—the whole pelvis, in fact, goes up as the knees are pushed down.

The reason of this ought to be very clear to you all.

When I force the knees down, I put the psoas and iliacus muscles on the stretch. To relieve the pain caused by this stretching of these muscles, the patient puts his body in the position on the table which I have described, viz., with his knees raised.

INFLAMMATION OF THE PSOAS MUSCLE.

The same deformity may occur in this disease as in coxalgia, and the patient may behave much in the same way. Mistakes are therefore very easy to make in regard to the diagnosis between these two diseases. The distinction may be made in the following manner: You must take hold of the limb and flex it. If it is flexed beyond a certain line, the pelvis in coxalgia will rise. In the case of inflammation of the psoas, the pelvis is not affected by this treatment.

SYMMETRICAL COXALGIA.

This is an affection of both hip-joints. It is often mistaken for spinal trouble. The position is very

peculiar at a certain period in the course of the disease, viz., when, after the conclusion of the first stage, the affection takes a favorable turn and ankylosis has commenced. The thigh-bones are carried forward, and the patient throws himself very far back, producing a deep concavity in the lumbar region. In walking he balances himself by throwing his hands and arms forward. At the same time the chest is made prominent. In bad cases of this affection the patient may be forced to assume a trotting gait.

FRACTURE OF THE CLAVICLE.

You see every now and then a patient walking into the hospital carrying one arm in the opposite hand, and leaning forward towards the side of the helpless arm. The whole body is inclined to that side. The explanation of these symptoms is an easy one. When the clavicle is broken, the shoulder drops, and carries the trapezius muscle down with it; while the sterno-cleido-mastoid muscle contracting, drags the inner fragment of the clavicle up. The patient feels the want of support for his shoulder, and puts his hand under the arm to hold it and the shoulder up. If he inclined his head towards the other side of the body, it would drag on the sternal fragment of the clavicle. By inclining the body and head towards the injured side, both the trapezius and sterno-cleido-mastoid muscles are relaxed.

INTRACAPSULAR FRACTURE.

Let us take, for example, a person over sixty years of age who has slipped on the pavement and doubled his limb underneath him in falling. On attempting to rise, the person may be unable to stir, or, if he has been helped up, finds one limb helpless. Such a patient will be found lying with the sound limb turned a little out, and its helpless, injured fellow turned so far out as to be resting entirely on the outer side of the limb and foot. The patella on the injured side will be found, upon careful examination, to look directly outward.

RHEUMATIC ARTHRITIS.

After the effusion has commenced in this disease, the limb on the diseased side is a little swollen, and, instead of lying parallel with the other limb, is flexed and carried away from it. The limb assumes the posture described above, because that position affords the greatest room to the fluid effused within the joint. A patient with rheumatic arthritis is afraid to touch anything with the affected member, dreads the least movement, and raises the hands in a warning attitude.

THYROID LUXATION OF THE THIGH-BONE.

In thyroid luxations of the thigh-bone the arms are placed behind the body, or crossed in front. The upper part of the body leans forward. The affected limb is held straight, with the toes turned out.

When, in the adult, the luxation has taken place into the obturator foramen, the toes are turned out by the rotator muscles. The limb may very often assume this position without the existence of a luxation, but when any violence has been suffered by the limb, and it assumes the position just described when the patient stands upright, we may be quite sure of the nature of the injury.

LUXATION OF THE THIGH-BONE ON THE PUBIC-BONE.

In this condition the limb is slightly flexed, and still further everted than in luxation of the thigh-bone. The body inclines towards the injured side. The hand usually rests on the leg, and the thigh-bone is carried forward.

The patient puts his hand on his leg to prevent spasm of the muscles.

THE LUXATION OF THE HEAD OF THE FEMUR ON THE DORSUM OF THE ILIUM.

Here the foot will be found to be everted. There will also be seen to be an unusual projection on the hip. The patient leans towards the affected side. The disabled limb is slightly flexed and shorter than its fellow, and is usually so much inverted that the toes touch the ball of the great toe of the other foot.

In another case of luxation of the head of the femur on the dorsum of the ilium where the bone is found to be a little lower down the general position of the limb is almost exactly the same, except that the toes are still more inverted and higher, nearly touching the instep. The adductor muscle draws the leg towards its fellow, thus partially rotating it, while the psoas, iliacus, and pectineus are engaged in flexing the limb and drawing it up.

DISLOCATION OF THE SHOULDER-JOINT.

This luxation is very often overlooked. No matter what the nature of the luxation, the arm will always be found to stand off from the body, unless it is a very old case, when it may hang stiffly at the side of the body. This luxation always flattens the shoulder.

The reason why the arm stands off from the body, in subcoracoid or subglenoid luxations of the shoulder-joint, is because the deltoid muscle is put upon the stretch, and the arm is thus forcibly pulled away. When the limb is found in this position, if the attempt be made to push it to the side of the body, it will immediately spring back.

LUXATION OF THE ELBOW-JOINT.

In this luxation the arm is usually rigid, and a marked prominence is felt behind the elbow; the elbow stands far back, the skin being stretched tight over the extremities of the ulna and radius. In these cases the arm is generally in a state of moderate flexion.

ARTHRITIS OF THE WRIST-JOINT.

The hand is held straight out, and there is a very marked swelling at the back of the wrist. The fingers are glossy. Any attempt to move the joint gives rise to the most exquisite pain. Arthritis of this joint frequently terminates in disease of the bone substance. The joint may recover if ankylosis takes place. This peculiar conformation and position of the hand and wrist is not found in luxation or fracture. It is the posture which gives the greatest amount of room to the effusion.

REMOVAL OF MOLES UPON THE FACE.—Dr. Llewlen Thomas advises (*British Medical Journal*) the use of the acid nitrate of mercury for the removal of moles upon the face. No pain attends the application, if care be taken to prevent touching the surrounding skin. The growth gradually shrivels away; the slough falls off in about a week, leaving only a very faint depression like a very indistinct small-pox mark.

OXIDE OF ZINC IN DIARRHŒA.—Dr. Jacquier, in the service of Dr. Bonamy, at Nantes, has noted the excellent effects of the following formula: Zinc oxide, gr. liv.; soda bicarbonate, gr. vijss. M. Divid. in pulv. iv. Sig.—One every six hours. In all cases the zinc produced rapid cures, even in chronic cases.

Original Communications.

DERMALGIA, ETC., FROM QUININE.

By HENRY M. FIELD, M.D.,

PROF. THERAPEUTICS AT DARTMOUTH.

I HAVE had within the year a case which well illustrates certain observations of Dr. Lente in the last number of the MEDICAL RECORD. A young married lady, recently from Indiana, summoned me for a severe attack of "chills and fever." She told me almost at first that she could not take quinine; that her father—giving the name of an Indianapolis physician, whom I knew by reputation—had despaired of using it in her case. She said, further, that it *poisoned* her; "it is as if every drop of blood and every tingling nerve were in my skin." There was great heat, œdema, in some places, especially in face and hands, great increase of cutaneous sensitiveness; all followed in a few days by desquamation of the cuticle. With these accidents were associated more or less of gastric disturbance, and, upon one occasion, violent and repeated vomiting, headache, and delirium.

Altogether, the suffering was so great, she said she preferred the "chills and fever." That her father had no resources for her except the imperfect and slowly-acting arsenic and strychnia.

As my patient was intelligent, I related to her the course I had pursued in several similar previous cases, and proposed it for herself. It consisted in giving quinine in greatly lessened doses. She accepted my proposition, but evidently with fear and reluctance. Four to five grains sulphate quinine for the twenty-four hours acted with full therapeutic power, but still produced a light attack of the skin disease—enough to suggest alarming results should the usual one to three gramme doses be prescribed. She made a satisfactory recovery.

The course suggested is, I am satisfied, so far as one can be from a limited experience, the right course to pursue in these cases of idiosyncrasy.

The exceptional—even the abnormal—action of a remedy may be of valuable assistance to us in interpreting the laws and the phenomena of its usual physiological action. For that reason, such cases as that detailed may have an especial interest for us. We are not to suppose that the quinine, in this its extraordinary influence, is excreted from the skin, as some writers have taught. There is no sufficient evidence of this.

On the other hand, I believe—as I have tried to show in my monograph on certain salts of quinine about to be published by the Vermont Medical Society—that the *main action* of the great remedy *is exerted upon the sympathetic*, and not upon the cerebro-spinal system of nerves. I think no one can attentively study Briquet's treatise without coming to the conclusion that such was his opinion, though it be not anywhere expressed in words. I cannot do more here than express this fact of my belief—although it involves many important considerations—that the dermalgia, urticaria, œdema, etc., which sometimes result from what should only act as a medicinal dose, serve to illustrate and enforce it.

Then, again, quinine makes a signal impression upon the vaso-motor system, as well of the cutaneous surface as of the nerve-centres—an impression which involves facts of great importance both in physiology and therapeutics. It has its own appropriate influence upon the heart, the arteries, and the capillaries and arterioles. With this in view, it is not strange that a departure from its normal working should bring discomfort or disaster to the skin.

Then, finally, quinine has a special action upon the skin as truly as arsenic has, but not of such significance of course, and thus far insufficiently studied. I am satisfied certain remedial resources await investigation in this direction. The praise which Mr. Erasmus Wilson accords to quinia for its power to cure that neurosis of the skin known as *pruritus*, and Mr. Spender's success with it in *pruritus ani* will serve to illustrate this statement.

A CASE OF VAGINISMUS

IN WHICH IMPREGNATION OCCURRED WITHOUT PENETRATION OF THE INTROMITTENT ORGAN.

By CHARLES ROTH, M.D., Ph. D.,

SURGEON TO THE NORTH-EASTERN DISPENSARY FOR DISEASES OF WOMEN.

MRS. H., born in United States, 22 years of age; has been married about two years. She has always been in perfect health after having had the ordinary diseases of childhood. She consulted me in March, 1878, because of an inability to have sexual intercourse with her husband, the mere attempt causing her the most excruciating pain. An examination of her sexual organs was proposed to her. To this she readily consented, but so extremely sensitive were the parts, that on the slightest touch with the finger to the vulva, she would scream for pain, thus making it impossible to examine her without an anæsthetic.

This I proposed to her, and on the following day she was seen with me by Dr. T. Keune, and put under the influence of ether. The labia being separated, a small vascular excrescence (caruncle), about the size of a pea, was found near the meatus urinarius, and, upon further examination, the remains of the hymen were found in great hyperæsthesia, of which large shreds projected into the vagina. There was nothing unnormal in the appearance of the uterus, and no further examination was made, as the above condition was considered enough to produce the symptoms of which the patient complained. This was proven by the fact that, as she came out of the influence of the ether, touching the caruncle or the remains of the hymen would cause her to draw away. An operation for the removal of these was proposed to her, to which she consented.

About four days after the examination, with the assistance of Dr. T. Keune, I operated upon her. The patient being anæsthetized and placed on the back upon a table, the remains of the hymen were entirely excised by a pair of curved scissors, and the caruncle at the meatus urinarius was seized with a tenaculum, and cut off with the scissors. The hemorrhage was very slight, and ceased under the application of a compress wet with water. The day following the operation, the glass vaginal dilator of Dr. Sims was introduced, commencing with the small size, which is three and one half inches in circumference. This was worn for two hours in the morning and four in the evening for three days; then the next size introduced, which was four inches in circumference, and worn for five days; and then the third size, four and one half inches in circumference. This was worn for about two or three weeks. The vaginal dilator at first caused some pain in introducing, but this soon sub-

sided, and the patient readily introduced them herself.

About a month after the operation she was perfectly cured, and, I may add, that she is now about four months advanced in pregnancy. The most interesting part of this case is, however, that, although her husband was unable to have connection with her, semen was discharged at the vulval orifice, and the spermatozoa found their way to the uterus, which they impregnated.

As the statement of both parties could be relied upon, and no signs of pregnancy visible, the woman being regular in the menstrual epoch, and no morning sickness complained of, the uterus was examined with the sound while the patient was under the anæsthetic for the operation, and was found to be enlarged and anteverted. To my surprise, I was summoned to her bedside a few days later, when she aborted, the fœtus being about two months of utero-gestation.

The fact which I wish to elucidate by the case is, that although in these cases of extreme vaginismus sexual contact is impossible, yet there are cases where impregnation has resulted, the semen being discharged over the external genitals, the spermatozoa have found their way to a more fertile region. Had I borne this fact in mind, and examined more closely for the signs of pregnancy, I might have found some which would have caused me to hesitate in passing the sound into the cavity of the uterus. Although the signs may have been present at this period, they were very indistinct.

232 East Fifty-Second Street.

Reports of Hospitals.

BELLEVUE HOSPITAL.

Notes of Practice and Peculiarities of Treatment.

POINTS OF INTEREST IN CASES OF LEAD-POISONING.

A male patient, æt. 20, and a worker in a looking-glass factory, gave the following history: Family history unimportant. He suffered from small-pox and scarlet fever when a boy, and last year had what was called bilious fever. He had been at work in his present occupation five years. With reference to his present illness, he first suffered from pain along the anterior and outer aspect of both arms; soon after, the right arm began to be weak. His appetite was poor, he had had some vomiting, had suffered from pain in the stomach and bowels and from constipation. The pain in the arms and the bowels continued for three or four weeks, and at times was quite severe. He had also suffered from pain in several of the joints. On stripping the patient it was found that there was marked tremor in the deltoid muscles as soon as a voluntary effort was made. The patient could extend the hands without difficulty, yet he could not do so against a very moderate amount of resistance. The blue line along the edge of the gums, commonly present in lead poisoning, was well marked. There was no marked pallor of the face. The case was regarded as interesting and exceptional from the fact that the primary paralysis was manifested in the muscles of the arms and shoulders; principally the deltoids. The tremor suggested the influence of mercury, but it had been found upon investigation that mercury was not used in the shop in which the patient had worked.

The source of the lead-poisoning was supposed to be a red powder that was used for polishing purposes.

Case II.—A male patient, æt. 45, and a worker in the Atlantic White Lead Works in Brooklyn, had painter's colic in 1862. His present sickness was of about eleven days' duration. He was attacked with pain in the bowels, which compelled him to cease labor, and it lasted about two hours. He then had some vomiting. With the colic there was also some diarrhœa. The blue line along the edge of the gums was well marked. It was thought that the colic was due to the effect of the lead, in part at least, and that the diarrhœa was the exceptional symptom in the case. There was no paralysis.

The treatment recommended was the daily use of a warm bath accompanied with brisk friction of the skin, removing the constipation, in the case in which it was present, by the use of croton oil and the internal use of iodide of potassium.

To relieve the pain hypodermic injections of morphine were to be given. In addition, the galvanic current was recommended for the paralysis.

LEUCOCYTHÆMIA—INTERESTING CASE.

The interest in this case centered upon the fact that, notwithstanding the great abundance of the white blood-corpuscles, there was scarcely any pallor of the face or of the mucous membranes. The patient was a man, æt. 26 years, and by occupation a laborer. Family history good. He himself had been a hard drinker. He had had more or less of malarial fever during the past four years; the last attack occurring about one year ago. He had had suppuration of the glands in the groins, but had no knowledge of ever having had either a chancre or gonorrhœa. He came to be treated for pain through the bowels and in the epigastric region. Upon physical examination the femoral glands upon both sides were found enlarged, also the cervical glands upon the left side. In the abdomen there was a hard tumor, which extended from the free border of the ribs upon the left side downward nearly to the crest of the ilium, and to the right of the median line of the body. Just above the umbilicus a distinct notch could be felt in the edge of the tumor. Microscopical examination of the blood showed that the white corpuscles were present in the proportion of one to two of the red. The diagnosis was leucocythæmia of the splenic and glandular variety.

ACUTE BRIGHT'S DISEASE—STRIKING CONTRAST IN THE SYMPTOMS IN TWO CASES.

Two cases of acute albuminuria were seen which were worthy of note because of the striking contrast in the symptoms.

The first patient gave the following history. Mrs. Mc——, æt. 35, married, and the mother of eight children, was admitted to the hospital September 18, 1878. She had always been a healthy and a hard-working woman. Three weeks before her last confinement she noticed a diminution in the quantity of urine passed daily, and also noticed that it was high-colored. At the same time she suffered from headache, pain in the lumbar region, vomiting, and her legs and feet became swollen. Her labor was normal. One week after parturition while washing, she was exposed to cold considerably, and soon after the swelling in the feet began to increase, the pain in the head and back became more intense, and she suffered from vomiting, but had no diarrhœa. In this condition she was brought to the hospital. On admission she had some

dyspnœa, some general bronchitis, and complained of pain in the back, and loss of appetite.

Her urine was dark-colored, had an acid reaction, a specific gravity of 1028, contained albumen in abundance, and small epithelial and hyaline casts.

The treatment consisted in the use of infusion of digitalis in half-ounce doses every three hours, and as a palliative remedy for the dyspnœa, teaspoonful doses of a mixture composed of equal parts of U. S. solution of morphia and co. spts. of ether.

Under that treatment the quantity of urine had steadily increased, the bronchitis had almost entirely disappeared, the œdema had been very much reduced, and the general condition of the patient in every way improved.

The diagnosis of acute Bright's disease was based upon the suddenness of the attack, the rapid development of the general dropsy, the diminution in the quantity of urine passed daily, its dark color, its high specific gravity, and the presence of epithelial and small hyaline casts.

The leading symptom in the case was the general dropsy, from which she had not suffered in connection with either of her former pregnancies.

The second patient was a widow, æt. 40, who was admitted to the hospital September 30, 1878. Her family history was unimportant. Her occupation was that of a laundress, and she had been a hard drinker. Three weeks before admission, and without apparent cause, the patient began to suffer from headache, which continued without intermission, though not sufficiently severe to prevent her from performing her daily labor. At the end of four days she thought she took cold; she vomited, and the headache increased so much in severity that she was obliged to go to bed. At the same time she suffered from pain in the lumbar region, and noticed that the quantity of urine passed was notably diminished. There was no diarrhœa. The headache increased in intensity, the patient became unconscious, and in that condition was admitted to the hospital. Soon after admission she had a convulsion which left her in a comatose condition. The convulsion was epileptiform in character. There was no history of epilepsy.

There was no dropsy, either local or general. Uræmia, however, suggested itself as the pathological condition which gave rise to the coma. A catheter was introduced, and a quantity of urine obtained which had a specific gravity of 1020, contained albumen in abundance and epithelial casts.

Her temperature was 102½° F. Attention was specially directed to that point, because it had been claimed by some that pure uræmia did not involve an elevation of temperature. The treatment consisted in the use of half-ounce doses of infusion of digitalis every two hours, dry cups over the kidneys, the administration of ten drops of Magendie's solution of morphine subcutaneously, and one drop of croton oil by the mouth. The patient became more restless, and then being unable to swallow, ten drops of the tincture of digitalis were given hypodermically, and also ten minims of Magendie's solution.

At the end of three hours, no special change in the condition of the patient being manifest, a drachm of the fluid extract of jaborandi was administered hypodermically. The patient soon broke out in a profuse perspiration. Two hours later she was able to swallow, and took a small quantity of milk. The drop of croton oil did not move the bowels.

Oct. 1st.—The patient's temperature was 102° F. Her mental condition was improved, and she was able to answer questions. Twenty-one ounces of urine were drawn, and on testing it, it was found to contain albumen and epithelial casts, and had a specific gravity of 1020. She was placed on a milk diet, and half-ounce doses of infusion of digitalis with drachm doses of the U. S. solution of morphia were administered every two hours. Two drops of croton oil were also given. In the afternoon she passed twenty-two ounces of urine and had a copious diaphoresis. The urine had a decidedly smoky appearance.

Oct. 2d.—The patient's mind was clearer, and she passed urine freely. Treatment continued.

Oct. 3d.—General condition improving. Croton oil had not moved the bowels, and sulphate of magnesia was administered, but was rejected by vomiting. Urine abundant.

Oct. 4th.—No movement from the bowels. Specific gravity of the urine, 1020; it contained no casts, and only a mere trace of albumen.

The subsequent history of the case was that the patient made an apparently good recovery. The case was interesting because of the manifestation of the graver symptoms of uræmia without dropsy, either general or local, and contrasted well with the former case, in which the leading symptom was the general dropsy.

ACUTE PNEUMONIA—DEMAND FOR POTENTIAL MEDICATION—PULMONARY ŒDEMA.

The case was interesting because of its severity and its complications.

A newsboy, æt. 14 years, German, was admitted to the hospital, October 20, 1878. Family history unimportant. He had usually had good health up to last winter, when he suffered during the entire wintry season from chills and fever. Three days before admission to the hospital he began to suffer from pain in the right side, near the nipple. The pain was sufficiently severe to prevent sleep. The following day he had a sharp chill, and at the same time began to cough. The cough was painful and was accompanied by a small amount of expectoration. The expectoration was not rusty. He had no chill after the first, but suffered from pain in the back, headache, and nausea, but no vomiting. His bowels were loose. During the thirty-six hours immediately preceding admission to the hospital he suffered from dyspnœa, and for three days had not had any food.

When admitted, his pulse was 145, respiration 48, and temperature 105¼° F. His face was flushed, his respiration was panting, and accompanied by moaning. The cough was painful. The sputa was viscid and tenacious, but not rusty. The pain in the region of the right nipple was severe. On examination, the physical signs of solidification of the lower lobe of the right lung were found. The urine had a specific gravity of 1033, contained urates, but no albumen.

With the high temperature, the increased frequency of pulse, and the pain, it was believed that the indications for treatment were to give the patient relief from the pain, and to sustain the vital forces.

Those indications were met by administering a half drachm of U. S. solution of morphia, two drachms of whiskey, and placing the patient on a milk diet.

In the evening of the same day, the pulse had fallen to 120, and the respiration to 44. That condition was doubtless due to the combined influence of rest in the hospital and the remedies employed.

At 5 P.M., ℥ v. of the tincture of digitalis were given, and ʒ ij. of whiskey.

At 6.30 P.M., the pulse was 120, the respiration 42. Two drachms of whiskey, half a drachm of U. S. solution of morphia, and milk, were administered.

8 P.M. Pulse 104, respiration 40, and temperature 105° F. Two drachms of whiskey with milk were given, and repeated every three hours.

At 10 P.M. the pulse was 120, and the respiration 40.

Oct. 21st.—Morning.—Pulse 123, respiration 44, temperature 104½° F. The patient complains of pain and moans with each respiration, unless kept under the influence of morphine. He takes milk freely and does not vomit.

Physical examination reveals evidence of consolidation of lower lobe of right lung. The whiskey was continued in two-drachm doses every two hours.

12 M The pulse was 130, and the respiration 36.

At 2 P.M. the pulse was 130, and the respiration 40.

At 3.15 P.M. the pulse was 120, respiration 38, and the temperature 105° F.

The patient complained of pain, and a half-drachm of the U. S. solution of morphia was given.

5 P.M. The pulse was 122, and the respiration 42, and at 7 P.M., the pulse was 109, and the respiration 40. The patient was somewhat delirious. A drachm of the U. S. solution of morphine was administered.

At 10 P.M. the pulse was 112, the respiration 34, and the patient was asleep and perspiring.

Oct. 22d.—At 7.30 A.M. the temperature was 104½° F. Two drachms of whiskey and ten drops of the aromatic spirits of ammonia were ordered every hour.

At 9.20 A.M. the pulse was 120, and the respiration 48. The patient takes milk and eggs freely. Five minims of Magendie's solution of morphia were given hypodermically.

2 P.M. The pulse 120, respiration 35, and temperature 103½° F. Whiskey continued in two-drachm doses. Tincture of digitalis was ordered in doses of 10 minims every two hours. Five minims of Magendie's solution were administered hypodermically.

At 4.35 P.M. the pulse was 128, respiration 32, and the temperature 103° F.; and at 8 P.M., the pulse was 120, the respiration 33, and the temperature 103°. Whiskey and aromatic spirits of ammonia to be given every hour. Ice and carbonic acid water p. r. n.

9 P. M. Retention of urine, and catheter employed. Pulse 118, and respiration 34. Morphine to relieve the pain.

Oct. 23d.—At 3 A.M. the pulse was 112, and the respiration 36. The tongue was dry. The patient was rational. There was pain in the right side, and ℥ v. of Magendie's solution of morphia were given hypodermically.

At 7.30 A.M. the pulse was 109, the respiration 33, and the temperature 103½° F. The urine was drawn.

At 10 A.M. the pulse was 128, and the respiration 30. For the first time the patient had a rusty expectoration. He also complained of intense pain in the side. Physical examination revealed the fact that the upper lobe of the right lung had been invaded, and that there were evidences of consolidation at the apex. The fact that the extension of the solidification had taken place without special variation in pulse and temperature was regarded as evidence that the fever was essential, and not merely symptomatic of a local affection.

At 2.30 P.M. evidences of pulmonary œdema were developed. Dry cups were freely applied, and in a short time the patient was considerably relieved. Two drachms of whiskey, ℥ x. of tincture of digitalis, and ten drops of the aromatic spirits of ammonia were given every half hour.

At 4.30 P.M. the physical signs of œdema of the lungs had disappeared. The pulse was 115. The whiskey, the aromatic spirits of ammonia, and the tincture of digitalis were repeated every hour.

At 7 P.M. the pulse was 130, the respiration 35, and the patient complained of severe pain in the right side. Five minims of Magendie's solution of morphia were administered hypodermically, and also ℥ viii. of tincture of digitalis. An enema was given, which produced free evacuation of the bowels and also of the bladder.

At 8.30 there was evidence of a moderate amount of pulmonary œdema, and ℥ x. of tincture of digitalis were given hypodermically. The patient also received ʒ i. of the U. S. solution of morphia.

At 10.30 the evidence of œdema had disappeared, and the respirations were 34.

Oct. 24th.—At 1 A.M. ℥ x. of tincture of digitalis were administered. At 3 A.M. the pulse was 120, the respirations 29, and there was no evidence of œdema. He was suffering from pain, and 25 minims of tincture of opium were given, and ℥ x. of tincture of digitalis.

At 5 A.M. he received ten minims of the tincture of digitalis. At 7.40 A.M. his temperature was 104° F.

At 8 A.M. ℥ x. of tincture of digitalis were given, and at 9 A.M. the pulse was 118, the respirations 32, and the patient was not suffering from pain.

The prognosis, however, was very unfavorable. It was with the view of preventing, if possible, the formation of heart-clot that the digitalis and the ammonia were administered.

The boy began to improve on the following day.

At the end of one week he was convalescent. The case then afforded a striking illustration of the rapidity with which the pneumonic exudation sometimes disappears, for the evidences of pulmonary consolidation were almost entirely absent.

During the entire course of the pneumonia, there was almost no expectoration, thus furnishing positive proof that an extensive exudation may be removed altogether by absorption.

The treatment after October 25th consisted chiefly in the administration of nourishment and a moderate quantity of alcoholic stimulants.

Progress of Medical Science.

A CASE OF ŒSOPHAGOTOMY.—At a meeting of the Clinical Society of London, Mr. MacCormac read a paper by Dr. McKeown, of Belfast, on this case. The patient consulted Dr. McK. on the 16th of January last; three weeks previously she had swallowed a set of false teeth, which stuck in the œsophagus. Various attempts had been made to displace it, but without avail. By palpation a body could be felt at the lower part of the neck on the right side, and by passing a whalebone with a smooth metallic end down the œsophagus, the diagnosis of a foreign body was confirmed. The patient being able to swallow sufficient food to keep her alive, and the body being just within reach of forceps, Dr. McKeown did not propose œsophagotomy till all other measures had failed. By manipulations on the outside the body was moved from the right to the left side, and seemed to have been pushed upwards. On two occasions it was seized firmly by long strong œsophageal forceps, but on the second occasion most alarming symptoms showed themselves. The plate could be moved easily from side to side, but when traction was exerted to bring it upward, the patient became livid, respiration seemed to cease, she could not speak, the tongue protruded from the mouth, and the eyes stared. It seemed as

if tracheotomy would be necessary, but fortunately, on relaxing the grasp and removing the forceps, all the symptoms quickly abated. All further attempts at extraction by the mouth were definitely abandoned, and œsophagotomy was performed on January 28th. The incision was made on the left side, and extended along the groove in front of the sterno-mastoid, from a point about opposite the middle of the thyroid cartilage to near the sternum. The cervical fascia having been cut, the carotid sheath, with its contained vessels, was carefully separated (chiefly by the handle of the scalpel and the director, scissors and knife being occasionally used to cut resisting bands of fascia) from the larynagel muscles, thyroid body, trachea, and œsophagus. The œsophagus was then opened as freely as possible, but much trouble was experienced in removing the plate, because of its size, inequalities and hooks. It could neither be moved up nor down, because of its hooks, and it was only by rotating it that it was at last freed and extracted. The plate was found to be situated entirely in the œsophagus at its beginning, the long diameter being vertical. After the operation the patient made uninterrupted progress. She was fed for a week by the stomach-pump tube. On the seventh day the œsophageal wound was healed, and on the fourteenth day the whole wound was closed. The wound was kept scrupulously clean by syringing with a solution of Condy's fluid, and also by causing the patient to swallow frequently, while the œsophageal wound was open, a little weak whiskey and water with chlorate of potash, a portion of which would pass from within outward. On leaving town the patient could swallow quite well, and her speech was unimpaired. Dr. McKeown concluded by remarking, that had he known beforehand the shape of the plate, he would not have persevered so long in attempting to extract it by the mouth, but would have operated at once. He thought the operation should be more frequently performed than it is. The plate was exhibited to the Society; it had three incisor teeth attached, and a place for a fourth. Its length was an inch and a half.—*The British Medical Journal*, June 29, 1878.

Propylamine in Chorea.—Dr. Purkhauser recommends propylamine as a prompt and effective remedy for chorea. He claims that it effects a cure in three or four days; relapses are cured in one or two days. He gives it in doses of from 15 to 19 grains per diem; this quantity is dissolved in four ounces of water and one ounce of syrup, and a spoonful is administered every hour. In his hands, three or four grammes, given in as many days, have invariably produced a complete cure.—*Le Mouvement Médical.*

Arsenic in the Treatment of the Bromide Rash.—The occurrence of bromide rash is not a rarity, but at the Queen-square Hospital a bad example of it has, according to Dr. Gowers, not been seen since the value of arsenic in the affection has been known. The rash occurs equally with the bromides of potassium and sodium, and still more readily with the bromide of ammonium, but it is always influenced by the arsenic. Many observers have noted the benefit derived from this drug, and the cases reported by Dr. Gowers fully corroborate it. They show, moreover, that, irrespective of age, the dose of arsenic required to remove the rash varies in different cases, and the dose required does not always depend upon the amount of the rash. The dose which cured some cases only effected a slight improvement in others, which did not yield until a large dose had been given. The arsenic affects the rash on the face more readily than that on the trunk. A dose of arsenic which removed the rash from the face had to be increased before that on the trunk disappeared. In the twelve cases cited by Dr. Gowers, the dose of the arsenical solution varied from gtt. i. to gtt. v., and the time occupied by the fading of the eruption varied from two weeks to two months, but the good effect of the drug ceased with its administration. Many other agents for the treatment have been tried, but none has been found of value comparable to that of arsenic.—*The Lancet*, June 15, 1878.

Causes and Cure of Insomnia.—Prof. James Sawyer, of Queen's College, divides insomnia into three groups which he names "psychic," "toxic," and "senile." The psychic form may be due to sudden and severe mental shock, which will sometimes at once induce persistent insomnia; or to prolonged mental strain, in all its varied phases, which produces partial or complete vaso-motor paralysis of the intracranial blood-vessels. The subjects of this form of insomnia are mostly men, particularly those of nervous temperament. A well-marked group of symptoms always follows prolonged suffering from this affection, most of which are given by certain writers among the signs of cerebral hyperæmia. It is probable that they mark what may be called irritable exhaustion of the brain, attended by more or less abnormal increase of intracranial vascularity, and accompanied by some general prostration of the bodily powers. In this form, an unnatural excitation of the cerebral vessels is the initial fault. In the next, the toxic form, a poisonous agent maintains cerebral vascularity at such a height that conscious cerebral activity—that is, wakefulness—is an inevitable consequence. Such a poison may be introduced into the body from without, or it may be a product of diseased processes arising within the body itself. The external poisons which most frequently give rise to sleeplessness are tobacco, alcohol, tea, and coffee; the internal, products which accumulate in gouty persons and in subjects of kidney disease. When due to the latter cause (internal poisons), the insomnia is rarely complete, the patient complaining that he has great difficulty in falling asleep, that he is easily awakened, and that he always dreams when asleep. The senile form is due to the degeneration of the smaller cerebral arteries; the vessels become less elastic, and physically unable to adapt themselves to the condition of relative arterial anæmia which is requisite for healthy sleep. In the treatment, soporifics are often necessary. Of these, the chief are chloral, opium, morphia, the bromides, Indian hemp, alcohol, and affusion with cold water. In the severer forms of psychic insomnia, sleep must be at once procured by some efficient hypnotic, preferably chloral. In the more chronic forms, chloral should be sparingly used. In the well-nourished, bromide of potassium, in from thirty to sixty grain doses, is by far the best hypnotic. Tincture of ergot, or tincture of digitalis may be combined with it. In many cases of chronic psychic insomnia, when the patient is worried, sorrowful, weakly, and anæmic, alcohol in the shape of a "nightcap" is without an equal. The formation of regular habits, and the taking of sufficient daily exercise should be insisted upon. In the toxic forms, the external poisons should be removed; the treatment of the internal forms involves the treatment of the diseases from which the poisons are derived. Senile insomnia is very obstinate; perhaps in the bromides, with full doses of hop or henbane, we have the best and least harmful means for its relief.—*The Lancet*, June 22, 1878.

THE MEDICAL RECORD:

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THE PUBLIC HEALTH ASSOCIATION.

THE American Public Health Association met last week and held a four days' session. An account of its proceedings is given elsewhere.

Owing to the fact that the Yellow Fever Commission was to report to it, the meeting this year aroused more than usual interest, and a large number of members attended.

We do not find that any very remarkable conclusions have been furnished by their deliberations. A good deal of time was spent in cementing the North and South with the emotions awakened by the late epidemic, and also in giving minute details of its history. Perhaps there was as much accomplished, however, as could be expected in the line of solving the yellow-fever problem, for the Commission had only been at work for six weeks. At any rate, they came to certain conclusions which will eventually be of great practical good, for they looked toward securing more universal and energetic action in the direction of public hygiene.

The Convention voted that yellow fever was an exotic disease, and could be prevented by quarantine. But as this quarantine must be extremely rigid and uniform for all endangered localities, it follows that legislative help is imperatively required. A committee was appointed to see that such help is obtained.

The Association did not advocate any special scheme of public health service, and did not ask for any special national commission, although such a project has been recommended by several scientific societies, and the President has listened favorably to memorials in regard to it.

The action of the Association, as far as it has gone, has given, however, a strong impetus to the securing of a more perfect system of national quarantine.

In regard to the more scientific aspects of the epidemic, the question of local or exotic origin was the one chiefly agitated. While the fever was voted to be an importation, there was a strong minority against this view, and the question cannot be considered settled. There was the same uncertainty in the conclusions repecting the value of disinfectants. The Yellow Fever Commission considered them useless, but this view was rejected by the Association.

It is to be hoped that the advice of the Association to the Yellow Fever Commission, that they endeavor to find the essence itself of the disease, can be carried out. The plans suggested would involve a deeper search into the first causes of disease than have yet been made.

We are obliged, indeed, to rest our satisfaction in the work of the convention on the results that are promised, more than on what have been given. Fortunately, much confidence in the realization of the former can be reasonably entertained.

MORE HOMŒOPATHIC RESOLUTIONS.

THE resolutions, found in another column, recently adopted by the Homœopathic Medical Society of Northern New York, at their annual meeting at Saratoga, afford additional evidence that a large proportion of the adherents of that school are gradually throwing off the mantle of transcendentalism that has so long enshrouded them. Finding, or believing that they found, many of the assertions and doctrines of Hahnemann capable of verification, his early followers somewhat rashly concluded that all his propositions—practical, theoretical, and speculative—were likewise true. It appears to have taken them a good many years to discover that such was not the case, but, having done so, with commendable frankness, they, by public declaration, throw off their allegiance to one of the most extraordinary of the doctrines that emanated from the fertile brain of the founder of their sect. This theory of dynamization, if it means anything, means that the medicinal activity of drugs is increased by subdivision and succussion. While prepared to admit, to a certain extent, the utility of subdivision and the increased rapidity of action obtained thereby, the other idea—that of increased power through succussion—is one unsupported by any known facts in physics or physiology. If we accept the views of modern chemists and physicists, that matter is not infinitely divisible, and accept the asserted weight of the ultimate atom of hydrogen, we find when homœopathic dilutions have reached to about their tenth attenuation that the last molecule of the drug is somewhere in the bottle; but in going to their next higher dilution the chances are just ninety-nine to one it will be kept out of the succeeding vial, and all after that will be well-shaken alcohol with no drug left. It was to escape this obvious dilemma that the dynamization theory was invented. Granting the gradual extinction of the material portions of the drug, Hahnemann claimed that there yet remained a spiritual essence capable of infinite diffu-

sion, which, when stirred up (by shaking), was enabled to produce the most extraordinary results. It is this theory that the homœopaths of the northern part of this State have, in the resolutions referred to, formally abandoned.

THE ADULTERATIONS OF SUGAR.

RECENT investigations made by officers of the custom-house in regard to the manufacture of refined sugars, and subsequent careful analysis of samples from some of the largest refineries, have disclosed a system of adulterations which will probably lead to the immediate action on the part of the Board of Health of this city. Adulterations of substances used as food may be considered in the light of being merely fraudulent, or of being deleterious to health, if not absolutely poisonous. The disclosures now made in regard to the adulteration of refined sugar show that both these forms of adulteration have been practised, and that sugar thus manufactured is fraudulently mixed with water and glucose, and poisoned by the addition of such chemicals as the muriate of tin, copper, etc. With the exception of flour, no substance is in such general use as an article of food as sugar and its syrups, and the fact of its wilful adulteration with such a rank poison as the muriate of tin cannot be too strongly denounced.

It appears this secret method of refining sugar was introduced about six years ago, and but recently came into general use. Some refiners are said to employ the muriate of tin both in the vacuum pan and the centrifugal machines, but usually in the latter only. The effect is to improve the color, and to cheapen the cost of whitening from one-quarter to one-half cent. a pound, according to the quality of the raw material. The tin is purchased both in the pig and liquid form, the former being dissolved in hydrochloric acid, and reduced with water to the proper consistency. It is then thrown into the centrifugal machine, which makes 1,500 revolutions in a minute, whitening a sugar that by a natural process would be yellow. This new method raises the drawback to be paid by the Government from 2.08 to 2.48 cents a pound, and for a refinery that produces about 4,000 barrels a day means a fraudulent profit of $1,125,000 per year from this adulteration alone.

But with the Government loss on the drawback we have no special concern; our province is solely to point out its vital effect on the public health. The refiners propound a theory that the chemicals which fail to neutralize enter into the sugar in such minute quantities that they cannot do any harm. The analyses show, however, very different results; besides, common-sense, as well as the experience of physicians, would at once decide that substances sufficiently powerful to eat the copper from the vacuum-pan can hardly be absolutely harmless.

The sweetening property of glucose compared to that of cane-sugar is small; its mixture with syrups on that account is to be deprecated as a fraud.

At present the names of those refiners who have been detected in producing adulterated and poisonous sugars have been withheld. We must condemn this practice of making specific charges of adulteration of a particular substance, and withholding the names of the guilty firms. There may be obvious reasons for this course, but it doubtless entails injustice upon many innocent persons, and places the whole business of sugar refinery under a ban of infamy where it may remain for an indefinite period.

We shall watch further developments in this matter with close attention, and trust that our Board of Health will take up the subject, putting in force the State law, which calls for the heavy penalty of $100 upon every package of sugar that is found to be thus adulterated.

BODY-SNATCHING.

IT would appear, judging from the accounts of body-snatching in the daily papers, that we are in the midst of an epidemic of the crime that bids fair to spread over the entire country. At first cropping out in Ohio, it extended to Indiana, thence to Connecticut, and now to this State, where the theft of the Stewart body is the crowning sensation of the day. If all the reports are true, the provincial colleges have a hard time in obtaining anatomical material, and the faculties run no little risk in being considered accessories after the fact of the theft. At least it will not be safe for a long while to come, for demonstrators of anatomy to have in their rooms any body or bodies of which they cannot give a good account. There is one reflection which grows out of the contemplation of body-snatching as a trade, and that is the necessity for such laws in the different States as shall formally sanction dissection, and as shall furnish the means for its practice. In fact, the recent grave robberies are the strongest arguments in favor of a liberal anatomical bill for every State having a medical school.

SEWER GAS.—Among the many disorders which may arise from the effluvia of drains and sewers, two have been recently mentioned in the English journals for the first time, viz.: abscess of the cervical glands, and a tendency on the part of ulcerated surfaces to become sluggish and to yield to no ordinary management. Sometimes these ulcers take on a diphtheritoid appearance.

A MILK TEST.—A German paper gives a test for watered milk, which is simplicity itself. A well-polished knitting needle is dipped into a deep vessel of milk, and immediately withdrawn in an upright position. If the sample is pure, some of the fluid will hang to the needle; but if water has been added to the milk, even in small proportions, the fluid will not adhere to the needle.

Reports of Societies.

AMERICAN PUBLIC HEALTH ASSOCIATION.

Annual Meeting, Richmond, Va., Nov. 19 to Nov. 22, 1878.

(Special report for THE MEDICAL RECORD.)

FIRST DAY—TUESDAY, NOV. 19TH.

THE opening session was held this evening. A larger number of members than usual was present. DR. HARRIS, President of the Association, called the meeting to order, and introduced Governor Halliday as presiding officer for the evening.

The governor delivered an eloquent address of welcome to the convention.

The President of the Association, DR. ELISHA HARRIS then made his opening address.

He mentioned a number of particulars in which the organization and objects of the Association could be improved, asserted his belief in the possibility of preventing future epidemics of yellow fever, and urged upon the convention the importance of securing legislative help in matters of quarantine.

DR. WOODWORTH and DR. STEINER followed him briefly.

SECOND DAY—WEDNESDAY, NOV. 20.

The regular work began with this morning's session. After some routine business DR. BEMISS read the

REPORT OF THE YELLOW FEVER COMMISSION.

Its history and mode of work were first described. This commission consisted of Drs. Bemiss, Cochran, and Howard, with Col. T. S. Hardee acting as sanitary engineer. It was organized Oct. 1st. Its members met at once in New Orleans, and worked there till Oct. 21st. They then set off to examine the other infected localities.

Wherever they went they obtained first the history of the earliest cases, and located their dwellings upon maps which they drew of every town visited. They then investigated the drainage, etc., of the place, and acquired all the general facts possible. Much stress was laid upon the value of the maps of the infected localities. By these is shown at once the situation of the first cases, and also the peculiarity which yellow fever has of spreading in groups, starting from a central point; in this differing markedly from the malarial fevers. The maps, in addition, enable one to study the disease in its relation to drainage, filth, elevation of surface, etc.

The most important part of the report, apart from the concluding generalizations, was its history of the

ORIGIN OF THE RECENT EPIDEMIC.

Upon this point, the question of the local or exotic character of the disease largely hinged. A thorough analysis of the first cases was made, and the conclusion reached that the disease was brought from the West Indies, either by a steamship in May or by fruit vessels in June. The epidemic began in the middle of July.

Having established the fact of the importation of the disease to New Orleans, its further spread was easily traced.

As a result of their investigations, they present the following

CONCLUSIONS:

First—We have not in a solitary instance found a case of yellow fever which we could justifiably consider as of *de novo* origin or indigenous to its locality.

Second—In respect to most of the various towns which we visited, and which were points of epidemic prevalence, the testimony showing importation was direct and convincing in its character.

Third—The transmission of yellow fever between points separated by any considerable distances appeared to be wholly due to human intercourse. In some instances the poison was carried in the clothing, or about the persons of people going from infected districts. In other instances it was conveyed in such fomites as cotton, bagging, or other goods of the same description.

Fourth—The weight of testimony is very pronounced against the further use of disinfectants. Physicians in infected towns, almost without exception, state that they are useless agents to arrest the spread of yellow fever, while some of them affirm that their vapors are seriously prejudicial to the sick.

Fifth—Personal prophylaxis, by means of drugs or other therapeutic means, has proved a constant failure. A respectable number of physicians think the use of small doses of quinine of some use in prevention.

Sixth—Quarantine established with such a degree of surveillance and rigor that absolute non-intercourse is the result, have effectually, and without exception, protected its subjects from attacks of yellow fever.

EVENING SESSION.

DR. BEMISS gave a detailed history of the fever at several large and small towns in Mississippi and Tennessee. He was followed by Dr. Cochran, who gave similar details in regard to other towns.

These accounts occupied the whole of the evening, and were minute and wearisome.

THIRD DAY—THURSDAY, NOV. 21.

The morning session opened with some very sharp criticisms by Major Walthall upon the tediousness of the detailed reports of the preceding day. He was much applauded and an announcement was soon made that thereafter no paper would be allowed more than twenty minutes.

COL. HARDEE then read his views on the sanitary condition and imperfect

DRAINAGE OF NEW ORLEANS.

He suggested the use of additional pumps to assist the drainage and of allowing the water of the river to run through the street gutters during the half of the year in which the Mississippi is higher than the city level. He referred to the fact that the fever at New Orleans prevailed even more violently in well-drained and well-cleaned districts than it did in foul ones.

DR. CHOPPIN followed. His views coincided with those of the Commission in regard to the origin of the fever and the efficacy of quarantine. He advocated an absolute non-intercourse between New Orleans and dangerous tropical ports during the months from May to September inclusive. He estimated the total loss to the city from the recent scourge to have been over $12.000.000. The annual loss to trade by closing the port to West India vessels would be $1,500.000.

Dr. Choppin was opposed to the National Government assuming the

REGULATION OF QUARANTINE.

First, because of its probable unconstitutionality; and second, because he feared the government officials thus created would be likely to be corrupted by importers. He advocated a united action in regard to quarantine amongst the endangered States.

PROF. J. G. RICHARDSON then spoke upon the

PATHOLOGICAL HISTOLOGY

of yellow fever. He said that the urine of the fever patients had shown a very rapid degeneration and desquamation of the tubal epithelium. In the kidneys, the tubules and Malpighian tufts were much clogged with small organisms. They were so numerous as to have undoubtedly hindered the excretory process. In the blood, he had uniformly found many dumb-bell bacteria, *B. sanguinis*. His observations led him to conclude that a thorough saturation of the system with an atoxic parasiticide, if such could be found, would be of therapeutical value.

Dr. Richardson's investigations and conclusions were endorsed by Dr. Robert White, of the Marine Hospital service, who followed with a paper on the same subject.

EVENING SESSION.

At the conclusion of the reading of the Yellow Fever Commission's Report, it had been referred to a special committee of which Dr. J. S. Billings was Chairman. The report of that committee on the

YELLOW FEVER COMMISSION

was presented this evening.

It approved the commission's work, so far as it went, and endorsed its conclusions, except the one in regard to disinfectants. It, however, urged that their work take a much wider range. It should try to discover the actual *materies morbi*.

In regard to the line of experiment by which such result might be obtained, they suggested that Havana was the most desirable place for the study. Excretions, or fluids, from the diseased should be inoculated in animals. This should be done both directly and after such material had been submitted to various conditions of warmth and heat, or after it had been mixed with other substances. If once a substance is obtained which will produce yellow fever, or any of its characteristic symptoms, this should be thoroughly studied and sifted, and by exclusion the essential element of the disease at length reached. By such process immensely valuable results would be obtained.

The report was signed by Drs. Billings, S. Oakley Vanderpoel, J. G. Thomas, and L. R. Janes.

Papers were read upon "How to Study an Epidemic," by Dr. Ezra M. Hunt, of New Jersey, and upon "Sanitary Responsibility," by Dr. J. G. Thomas, of Savannah.

A resolution was adopted appointing a committee of five to urge upon Congress the necessity of the early publication of the Catalogue of the Army Medical Library.

The meeting then adjourned.

FOURTH DAY—FRIDAY, NOV. 22.

At the morning session an election of officers first took place, resulting as follows: President, Prof. J. L. Cabell; First Vice-President, Dr. J. S. Billings, U. S. A.; Second Vice-President, Dr. Samuel Choppin; Secretary, Dr. E. R. Janes; Treasurer, Dr. H. B. Baker; and an Executive Committee of six.

The Committee on Resolutioms made a report in regard to recommending a plan for a

NATIONAL QUARANTINE.

While strongly approving of some legislative action in this direction, they did not think that the Association should commit itself to any particular method. They favored the appointment of a committee to take charge of the subject.

The committee on subjects for discussion then presented four propositions to be voted upon in the evening session after discussion. As finally adopted they are as follows:

First.—That the yellow fever of 1878 was a specific disease not indigenous to or originating spontaneously in the United States, and its appearance in this country during that year was due to specific causes.

Second.—That quarantine, established with such rigor and precision as to produce absolute non-intercourse, will prevent the importation of specific causes of yellow fever.

Third.—That it is the duty of the general government to aid in the establishment of practical and proper quarantine by all the means in its power.

Fourth.—That it is the duty of the general government to appoint a commission of experts to make a thorough investigation into the causes of yellow fever, and the best method of preventing its introduction into this country, and to make such an appropriation as will permit of the securing of the services of the best men and of the best means for carrying out such an investigation.

Fifth.—That it is the duty of the general government to invite foreign nations to co-operate with it in the establishment of uniform and effective international quarantine regulations.

Sixth.—That whatever may be the permanent value of quarantine, there is no doubt of the importance and value of internal sanitary measures in the prevention or modification of epidemic yellow fever; and that this association urges upon State and municipal authorities the great amount of responsibility which rests upon them on this account at times when no disease is prevailing or threatening.

A discussion followed the presentation of these propositions, but is was not a very lively one.

The night session began with the election of several new members. The discussion was then renewed and the propositions, as given above, were finally adopted.

A committee of six was appointed to collect data upon which to base an appeal to the medical profession for relief of the widows and orphans of the physicians who died in the late epidemic.

The convention then passed various resolutions of thanks. It voted to meet next year at Nashville, Tenn. At 11 P.M., it adjourned *sine die*.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 23, 1878.

DR. JOHN C. PETERS, PRESIDENT, IN THE CHAIR.

(Concluded from page 396.)

SARCOMA OR HÆMATOMA OF THE BROAD LIGAMENT? —FATAL HEMORRHAGE.

DR. SATTERTHWAITE presented the uterus, ovaries, and attachments of a patient with the following history:

On September 27th, at about noon, I was suddenly called to meet Dr. J. T. Kennedy, in a case of col-

lapse. The patient, Mrs. M. V., a young woman, of fine physique, was found unconscious, cold, and pulseless. She was breathing very superficially, at long intervals, and was evidently beyond hope of recovery. Alcoholics had been given hypodermically and by the rectum, and they were continued, but without any benefit. The patient, on going to bed, had felt quite well, but in the night had a sinking spell of so alarming a character that Dr. Kennedy was sent for. The sinking spells occurred at intervals during the morning, and all efforts at reaction proved unavailing. She died a few moments after I saw her. The autopsy was performed the next day by Dr. Goldschmiedt, the Deputy Coroner, as neither Dr. Kennedy nor I felt that we knew the cause of death, and because there were some circumstances connected with her previous history that made a medico-legal inquiry desirable.

On opening the abdominal cavity, it was found partly filled with blood, mostly clotted, and evidently of recent date, while Douglas's space was completely packed with soft deep-red clots. The blood had penetrated the right broad ligament through an opening that would about admit the passage of a No. 2 English bougie, and had escaped from a nodular body attached to and beneath the ligament, and about one and a half inches from the fimbriated extremity of the tube. The tumor was about the size of a pullet's egg; cutting into it, a thick muco-purulent substance escaped from a small cyst, as large as a filbert in its centre, while round about it was clotted blood, more or less organized, and soft, friable matter. The Fallopian tube did not enter it, but stopped short on either side, where it was occluded.

The uterus was enlarged, soft, and the os was dilated, so as to easily admit the finger; the cavity was empty and covered with a thick velvety material, looking like the decidua, and, indeed, it proved to be so by microscopic examination, as the arborescent villi were readily recognized. Some statements made prior to death made it appear probable that a criminal abortion had been produced. The ovaries were found in good condition, and the parovarium, or organ of Rosenmüller, was not involved. This organ, known as the remains of the upper portion of the Wolffian body, was seen lying above and external to the ovary; the lower part of the Wolffian body, the paro-ophoron of Waldeyer, which is said, in the adult female, to lie nearer the uterus, was clearly not involved. Microscopically the friable substance about the cyst might be classed as a sarcoma, that is, it consisted of round and fusiform corpuscles embedded in a homogeneous stroma. Unfortunately, such appearances belong also to a blood-clot that has commenced to organize, and therefore it is difficult, if not impossible, to distinguish between them from the bare microscopic examination. Sarcomas in such situations are rare, if, indeed, any are on record. I should feel more inclined, therefore, to regard it as a cystic hæmatoma of the tube, which is sometimes met with. The origin of the blood in such a situation is difficult to comprehend. It would appear possible that the injection of fluids at the time of the attempted abortion might have produced inflammation in the tube, leading to hemorrhage and the formation of a cyst within the clot, but in this case the cyst was of too old a date to be explained on this theory, and the hæmatoma, if such, too old, for the operation was performed presumably a few days before death. The occurrence of the blood-tumor will have therefore to be explained in some other way. Pelvic hæmatoceles are much rarer, in my experience, than is commonly supposed. The experience of a good observer, who puts them as occurring in seven out of every thousand autopsies, would agree very nearly comparatively with my own experiences. It may perhaps be satisfactorily explained as having first originated in an inflammation of the Fallopian tube, leading to cystic degeneration and occlusion, the hemorrhagic deposits being formed at various times during the congestion of the parts at the menstrual period. It is interesting to know that in this particular instance the actual cause of the fatal hemorrhage was pretty certainly sexual connection while the parts were in a condition of plethora—in confirmation of two facts that have been previously noticed.

This case is interesting as shedding light in the cause of peri-uterine hemorrhage in which the ordinary recognized causes of the disease were absent.

Correspondence.

A TROUBLESOME CASE OF MIDWIFERY.

To the Editor of The Medical Record.

Sir:—With your permission I would like to publish the following curious history of a difficult case of labor which happened in my practice about two weeks ago: One night, at eleven o'clock, I was called to see Mrs. R., who was in labor; on arriving I found a strong, healthy woman, a primapara, in the throes of childbirth. I made an examination and found that the waters had escaped, leaving an ordinary vertex presentation, a left occipito-anterior. After an hour's delay, as her pains were very infrequent, I gave her five grains of quinine, which after a short time I repeated. At three o'clock I lay down for an hour and was awakened by the nurse who stated the patient was vomiting violently. I gave her seven minims of Magendie by the mouth, which controlled it. I then made an examination. I found the vaginal secretion was scanty and the anterior lip of the uterus was œdematous. The os was dilated to the circumference of seven inches. The patient had now been in labor for about nine hours. I waited for a pain. I found no retrocession of the head afterwards. The pains were very feeble. My patient's pulse was excessively rapid. I determined to send for my father, Dr. John Burke, and deliver by forceps. He arrived at nine o'clock. I administered chloroform, and after great difficulty, she was delivered of a female child. It expired soon after. Putting my hand into the vagina I discovered the presenting head of another baby. My father promptly turned and delivered it alive. I now waited for the placenta. In vain. I resolved to put my hand up and extract it. I found it very forcibly attached. The uterus was uncontracted, but as I drew out the placental mass I felt it contracting under my hand. Everything appeared well. We had saved the second child, and the mother was in good condition.

I applied a bandage, and stepped into the adjoining room to wash my hands. I was attracted to my patient by a low cry. I ran to her; she waved her hands as if to grasp the air. She was pulseless. I plunged my hand into the pelvic cavity. It was filled with soft clots. Not waiting to turn these from the vagina, I forced my hand in until it reached the uterus, which lay well up, above the superior strait. The uterus was like an old felt hat. I called for ice. Stuck my hand into the uterus and kneaded it from without.

The blood could not pass my hand at the vulva; it acted as a tampon. I packed in ice and the contraction was but feeble. I then called for *hot* water and a Davidson syringe. I pumped in hot carbolized water into the pelvic cavity, which seemed like a huge cavern, until I felt the uterus contract. I waited until it felt like a ball and then I cautiously withdrew my right arm and hand. I had given her about a pint of brandy and about half an ounce of extract of ergot. I had no assistance but some frightened women. Mrs. R.'s pulse was now faintly perceptible. I had been about forty minutes with my hand in the vagina. I directed small quantities of beef-tea, brandy, and quinine to be administered.

I washed out the vagina twice daily with carbolized water. I directed a sponge constantly kept wet with a disinfectant to be placed over the vulva to catch the lochial discharges. Mother and child are now very well. I cannot estimate the quantity of blood lost, but the clots almost filled a chamber-pot. I gave opium for security, although she had no pain or any signs of peritonitis.

MARTIN BURKE.

147 LEXINGTON AVENUE, Oct. 19th.

Medical Items and News.

DR. SEATON ON RE-VACCINATION.—Generally speaking, the best time of life for re-vaccination is about the time when growth is completing itself, say from fifteen to eighteen years of age; and persons in that period of life ought not to delay their re-vaccination till times when there shall be a special alarm of small-pox. We are strongly of opinion that there would be a great deal more re-vaccination if the family medical man always made a point of drawing the attention of parents to the necessity of their adult children being re-vaccinated. We feel certain that as a rule medical men neglect to do this, little thinking how, by insisting on the repetition of the operation, they have it in their power to starve, and therefore to weaken the force of any future epidemic of small-pox.—*Report to the Local Govt. Board.*

HOMŒOPATHIC RESOLUTION.—The following preamble and resolution was adopted by the Homœopathic Medical Society of Northern New York at their annual meeting held at Saratoga Springs, July 9, 1878:

Whereas, The theory of dynamization set forth in the *Organon* has, in the past few years, developed in the homœopathic school a peculiarly extravagant and extremely questionable method of preparing homœopathic remedies, which seems to be clearly without explanation upon any known principle other than that derived from magnetic or psychological forces; and

Whereas, The accumulated experience of the past half century has demonstated that the process of dynamization of medicinal substances, described and recommended in the *Organon* by Dr. Hahnemann, is neither consistent with the principles of the homœopathic school, nor reliable or satisfactory in practice; and

Whereas, It would appear that sufficient time and an abundant opportunity has been afforded for furnishing conclusive evidence showing the scientific and practical value of the theory of dynamization of medicinal and non-medicinal substances, if any such curative power existed therein; and

Whereas, No satisfactory reasons have been adduced in support of this fanciful theory, and no trustworthy evidence of its claim for homœopathic endorsement has been furnished; therefore

Resolved, That we deem the theory of dynamization to be essentially non-homœopathic, and, while occasionally, from a psychological point of view, it may be appropriately applied in practice, in the opinion of this Society it is still so obscure as to its origin and development, so uncertain as to its application, and has so little apparent connection with the proper application of the principle *similia*, as to warrant the conviction, after repeated and carefully conducted trials, continued through many years, that it is unworthy the confidence of the homœopathic profession, and being non-homœopathic, should not receive the endorsement of the homœopathic school.—*Homœopathic Times*, Nov., 1878.

SUBCUTANEOUS INJECTION OF ETHER.—Chantreuil records four cases of post-partum anæmia wherein transfusion appeared indicated, which were successfully treated by subcutaneous injections of ether and alcohol.

A NEW DIAGNOSIS OF HYDRO-PERICARDIUM.—Dr. T. M. Rotch, of Boston, asserts that an area of flatness in the *fifth right intercostal space, about an inch from the right edge of the sternum*, is a most distinctive sign of pericardial effusion. The flatness on the left side is obscured by that of the heart itself.

COLIC.—The inverted posture—not exactly standing upon the head, but the next thing to it—is a prompt and effectual cure for *flatulent colic*. Time, one to five minutes. Some movement of the gas in the intestine is the cause of the relief afforded.

THE CHICAGO MEDICAL JOURNAL AND EXAMINER for October reports a case of sunstroke with a temperature of 113° F. Rapid recovery followed ice to the groins, axillæ, neck, and head, reducing the temperature to 99.5° F. in an hour.

TINCTURE IODINE A SUBSTITUTE FOR QUINIA.—Dr. Fordyce Grinnell, of the Wichita Agency, Indian Territory, has made an extensive trial of *tr. iodini* in *malarial diseases* and claims that "*the results have been fully equal to those obtained from quinia.*" Dose.—Ten drops, in sweetened water, three or four times a day, for adults.

FOR MOSQUITO BITES.—Rub on the bite a little soap (toilet), then allow a stream of cold water to run upon the part for three or four minutes. The itching is at once relieved and no further annoyance results. —C. J. S. DIGGES, in *Lancet*.

CARBOLIC ACID IN SMALL-POX.—The long discussion carried on in the London *Lancet* has proven: 1. The comparative failure of the internal and external use of diluted acid in aborting the eruption of variola. 2. The need of further investigation in this direction.

ANTISEPTIC SOLUTION OF BENZOIC ACID.—Dissolve half an ounce of pure *acidum benzoicum et resina* in ten ounces of rectified spirit. This may be mixed with water in different proportions for lotions, gargles, mixtures, etc. It is quite agreeable to the smell and taste, is innocuous, is more powerfuly antiseptic than salicylic acid, and volatilizes almost as readily as carbolic acid.

DAMAGES FOR IMPERFECT SEWERAGE.—A Rutland (Vt.) man, named Lynch, claims $40,000 damages from the village for the loss of three children from diseases caused by imperfect sewerage.

THE TASTE OF SALICYLIC ACID.—A solution of salicylic acid and borax, each gr. x. to f. ʒ i. has a bitter taste and acid reaction; whereas a solution of ten grains of the former and *fifteen* of the latter to the ounce has no disagreeable taste, and is nearly neutral, and is just as valuable therapeutically.

ACNE VULGARIS.—Dr. Howard Cane, of London, recommends the use of calcium sulphide in doses of one-fourth grain thrice daily, gradually increased to six grains a day, for the cure of *acne vulgaris*. He reports sixteen cases, thirteen perfectly cured, the other three greatly benefited. The remedy must be taken some weeks or months to secure a cure.

ERYSIPELAS.—Prof. Hueter reports (*Berlin. klin. Wochen.*, No. 24, 25, 1878) seventeen successful cases of erysipelas treated by subcutaneous injection of carbolic acid. Details in translation are to be found in the *Med. Times and Gazette*, Sept. 7, 1878.

SALT IN EMPYEMA.—M. Houzé D'Aulnot, of Lille, recommends (*Progrès Médical*) the use of *solutions of common salt*, from one to ten, one to five, to those which are saturated, for washing out the pleura, in empyema, and abscesses.

LICHEN URTICATUS.—A writer to the *Lancet* recommends the following treatment for obstinate cases of this affection: milk of sulphur, 2 oz.; hyposulphite of soda, 1 oz; dilute sulphuric acid, ½ oz.; gelatine or patent size, 2 lbs.; to be well mixed with a pint of warm water, and added to a *tepid* bath, in which the patient should remain an hour, twice weekly. In addition, let an ointment of hydrochlorate of ammonia, 20 grs., to an ounce of benzoated lard, be applied daily.

THE LATE MR. SIMON.—THE Royal College of Surgeons of England have just come into possession of a marble bust of the late Mr. Simon, F.R.S.

ERGOT IN POLYURIA.—Ergot has been very useful in the treatment of *polyuria* (diabetis insipidus). Given in doses of half a drachm of the fluid extract thrice daily, gradually increased to one and two drachms equally often, it is said to have permanently cured the complaint.

ELECTRICITY IN NEURALGIA.—As a guide to the proper current indicated in the various forms of neuralgia, Dr. Rockwell says: "I find the effects of pressure are exceedingly useful. I would not lay it down as a law, but it will be found, in the great majority of cases of neuralgia, where firm pressure over the affected nerves aggravates the pain, the galvanic current is indicated, while the Faradic current has the greater power to relieve when such pressure does not cause an increase of pain."—*Med. and Surg. Brief.*

CHLORAL IN RETENTION OF URINE.—In a case of retention of the urine for twenty-four hours in a case of pregnancy, wherein catheterism had failed, Tidd gave two ten-grain doses of chloral at a half hour's interval, with the effect of producing profound sleep and the spontaneous passage of an enormous quantity of urine.

A NEW BATTERY.—An Italian professor has arranged a new battery in which a solution of sulphurous acid is substituted for the usual liquids. The zinc is dissolved without the least development of hydrogen. It is claimed his battery acts well, and gives a very strong current.

AMERICAN MICROSCOPES.—Prof. J. Gibbons Hunt, M.D., of Philadelphia, one of the most experienced microscopists in the country, says it is affectation or stupidity for Americans to send to Europe for microscopes, when they can purchase better ones at home.—*Med. and Surg. Reporter.*

CHRONIC VARICOSE ULCERS.—Wash with an eight per cent. sol. of zinc chloride, then cover with *wet* borax lint, and over the latter spread gutta-percha tissues. When healthy granulations appear, cover the surface with *dry* borax lint, without the impermeable covering. This is said to give excellent results.

ELASTIC ADHESIVE PLASTER is prepared by Dr. W. P. Morgan, of Baltimore, Md., by giving india-rubber tissue or sheeting a coating of plaster, made by mixing together lead plaster, 1 lb., and resin, 6 drachms. It is an excellent covering in cases of psoriasis, intertrigo, eczema, etc., and its elasticity makes it invaluable in securing the coaptation of incised wounds, and in the treatment of abscesses.

A CHEAP DISINFECTANT AND DEODORIZER.—Dissolve a drachm of lead nitrate in a *pailful*, and a drachm of common salt in a *jugful* of *soft* water, and mix the two solutions. Soft water is essential, on account of preventing the formation of an insoluble carbonate of lime and lead. Dip rags into the solution, and hang them up in the offensive room, or pour some of the mixture upon excrements, or down the privies or sinks. This is of ordinary strength, but the solution may be made stronger if desired. If carb. lead and lime form, pour off the clear liquid and use none of the sediment.

CHLOROFORM POISONING AND TREATMENT.—Prof. J. A. Larabee successfully treated such a case with gr. $\frac{1}{10}$ digitaline, hypodermically, the dose repeated in one and a half hours. A little later gr. $\frac{1}{16}$ atropia was given hypodermically. Four hours from the time the doctor first saw the patient both pulse and respiration had recovered their tone.

VERATRUM VIRIDE IN PUERPERAL ECLAMPSIA.—Two to four drops of the tincture, given sufficiently often to keep the pulse at sixty, was a successful treatment in four cases reported by Dr. J. W. Griggs.

THE VOMITING OF PREGNANCY.—Lubelsky has given almost immediate relief in the *vomiting of pregnancy* by spraying ether over the epigastric region and corresponding portion of the spinal column. Continue for three to five minutes, and repeat every three hours.

PELVIC EXUDATIONS—REMOVAL OF.—Prof. Briesky has caused pelvic exudations to be rapidly absorbed by frequently painting the mucous membrane of the cervix uteri and vagina, and the abdomen (pelvic) with tr. iodine. We would recommend that the ordinary tincture be diluted one-half with alcohol.

DEATH FROM CHLOROFORM.—Another death has occurred in Great Britain from the administration of chloroform. (*British Med. Jour.*, Oct. 19.) The patient was a female, aged 38 years, who injured her arm by a fall several weeks previously. An examination at a dispensary revealed the existence of an unreduced dislocation of the elbow. For the treatment of the latter she was admitted to the Whitworth Hospital, Drumcondra. In order that the inflammatory adhesions might be broken up chloroform was administered. The heart had been previously examined and pronounced healthy! Death occurred suddenly. The autopsy revealed a fatty heart. The amount of chloroform used was forty drops.

THE YELLOW FEVER FUND AND THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—At the regular meeting of the Medical Society of South Carolina, held Oct. 1, 1878, the following were unanimously adopted:

Resolved, 1. That the action of the Medical Society of the County of New York in raising a fund for the aid of the families of physicians who have fallen or may fall victims to the epidemic of yellow fever now prevailing, meets with our warmest approval, and calls for our earnest co-operation.

Resolved, 2. That a committee be appointed composed of the officers of this Society, to solicit contributions from our members and the members of the profession generally, or from any other persons who may be disposed to aid in this noble charity.

Resolved, 3. That the funds so raised, as also a copy of these resolutions be forwarded as soon as practicable to the President of the Medical Society of the County of New York, Dr. John C. Peters.

Resolved, 4. That these resolutions be published in the *Charleston News* and *Courier*.

W. H. BAILEY, M.D.,
Secretary of the Society of South Carolina.

DR. M. POLANO, Professor of Medicine, died in the Hague on the 27th of September.

POISONING BY CANNED CORNED-BEEF.—An entire family in Grensbach, Germany, was recently seized with symptoms of severe poisoning after eating some American corned-beef. Metallic poisoning is suspected, and an official investigation has been ordered.

FIVE CHILDREN AT A BIRTH.—A woman in Lägerdorf, near Kiel, Germany, was delivered of five living children, three boys and two girls, on September 29th. One of the children died on Oct. 1st, but the other four are doing well.

TREATMENT OF MERCURIAL SALIVATION.—Dr. Stynap treats mercurial salivation by small doses of sulphur combined with a little opium or morphine. The following is his formula: ℞ Sulphur. precip., grs. xxij.–xlv.; Potass. chlorat., grs. xlv.–℥ j.; morph. muriat., gr. iss.; emuls. amygdal., ℥ ix. M. Tablespoonful every three or four hours. This is continued until diarrhœa sets in.

PROF. HASSE, of Göttingen, has been relieved from active duty, at his own request, on the score of age and infirmity.

HYRTL'S HAND-BOOK OF ANATOMY.—The fourteenth edition of Hyrtl's celebrated Hand-book of Anatomy has just appeared.

NEW HUNGARIAN UNIVERSITY.—It is said that a new Hungarian University will be established in Pressburg.

UNMARRIED MOTHERS.—The Council General of Marseilles has adopted the report of M. Delibeo, recommending to the benevolent attention of the government a proposition of the Marseilles Society for the Protection of Infancy, to the effect that in one hospital in each department a special ward be set apart for the reception, under the seal of secrecy, of unmarried girls who have had the misfortune to become pregnant. The report states that similar institutions are in operation in Rome, Vienna, Prague, and Berlin, where they have proved very successful.

MEANS OF RELIEVING PAIN IN CANCER OF THE UTERUS.—Dr. Lawrence, of Bristol, states that ergot in doses of 20 grains every six hours relieves in a striking manner the pains of cancer and epithelioma of the uterus. It calms the violent pulsations that ordinarily yield only to exhausting hemorrhages. It seems to act by diminishing the afflux of blood to the uterus. Another valuable remedy is the cotton of chloral-hydrate. It does not act in the seat of the disease itself, but it relieves the radiating pains into the hips, thighs, and groins. As a local application, Dr. Lawrence employs carbolic acid, which he applies by means of a speculum and a tampon of wadding, and by injections of carbolated glycerine (℥ ss.) and water (℥ viij.).

ALCOHOL, INSANITY, AND SUICIDE.—From statistics gathered by Dr. Lunier, it appears that the consumption of alcohol in France, which was 1.09 litre per capita in 1831, had risen to 2.84 litres in 1873. The cases of insanity of alcoholic origin had increased in the same proportion: of the lunatics admitted into the asylums in 1838, the malady could be ascribed to alcoholism in 7.067 per cent., while from 1874 to 1876 the proportion was 13.04 per cent. In 1849 the proportion of suicides attributed to occasional excesses or to habits of drunkenness was 6.69 per cent.; in 1876 it was 13.41 per cent.

EXPULSION OF A FOREIGN BODY FROM THE ŒSOPHAGUS BY MEANS OF APOMORPHINE.—M. Veiger reports the case of a child who swallowed a prune-pit that stuck fast in the œsophagus. Ipecac was administered, but did not produce emesis. As the proper instruments for the removal of the foreign body were not at hand, two subcutaneous injections of apomorphine, altogether $\frac{1}{17}$ gr., were administered. Vomiting soon set in, and the pit was expelled. The child presented subsequently no unfavorable symptoms.—*Lyon Médical.*

ON THE EMPLOYMENT OF LISTER'S METHOD IN THE TREATMENT OF BURNS.—The burned part is to be carefully disinfected, and then covered with a piece of linen spread with Lister's boracic acid. Then follows the envelopment with carbolized gauze or salicylic cotton. According to H. Busch of Bonn, under this dressing the necrosed parts are separated, move gradually and easily, and the granulations never become exuberant. The most striking results, however, are seen in the cicatrix. Instead of the usual extensive cicatricial bridles which project above the surface and exert traction on the neighboring tissues, an almost smooth cicatrix forms, which remains elastic and extensive, and does not cause contracture.—*Centralblatt f. d. Med. Wissen.*

SALICYLIC ACID AS AN ANAPHRODISIAC.—This fact was asserted not long ago by Dr. C. T. Jewett, and has had recent confirmation in the case of a New York city veterinary surgeon, whose patient had been taking soda salicylate for some time. Damiana restored the sexual appetite promptly.

CORK WOOD.—Australia gives us another valuable medicine, namely, the leaves of the cork wood (*Duboisia myoporoides*), from which an extract is yielded having similar (though more speedy) action to belladonna.

TREATMENT OF GOITRE BY ERGOTINE INJECTIONS.—Dr. Flashar reports the case of a seventeen-year-old peasant girl, who suffered from a large struma vasculosa, together with exophthalmus and occasional palpitations. Subcutaneous injections of ergotine were first tried without effect, and the drug was then injected into the parenchyma of the goitre. After three injections (each ½ of a Pravaz syringeful) the tumor disappeared entirely, and though years have since

elapsed it has not recurred. After the first injection a throbbing headache set in, which was confined to one side, and was accompanied by a feeling of intense heat in the corresponding side of the head, ear, and cheek, and by redness of these parts. These symptoms must be ascribed to a temporary paralysis of the sympathetic, which seems remarkable in view of the fact that ergotine contracts the blood-vessels.—*Centralblatt f. d. Med. Wissen.*

TREATMENT OF HYSTERICAL REFLEX-NEUROSES.—Prof. Weber recommends the protracted employment of chloroform inhalations in the treatment of obstinate and severe cases of hysterical reflex-neuroses, of the respiratory apparatus, when the primary seat of irritation cannot be discovered and treated. He has himself proved the value of the inhalation in several cases. His first case was a lady with a spasmodic cough, that had proved rebellious to all treatment; she was cured in eight days by the chloroform inhalations, which were administered as often as the cough came on. A child with sneezing spasms was cured in three days by the chloroform. Another lady with a spasmodic cough was treated with the same remedy for fourteen days, the inhalations being administered at first four or five times, and afterwards two or three times daily. She was much improved; the cough only came on after a walk, and the inhalations were only required then. In four weeks she was discharged cured; a subsequent slight relapse was cut short by the internal administration of chloroform. In the case of a girl, fourteen years of age, who suffered from spasms of sneezing, the inhalations produced a speedy cure.—*Memorabilien.*

A CASE OF ACUTE CARBOLISMUS.—Dr. Oberst reports the case of a convalescent in the surgical ward of the Augsburg hospital, who was given instead of bitter-water, six ounces of a five per cent. watery solution of carbolic acid. Three minutes after the dose was swallowed Dr. Oberst saw the patient; he was then unconscious, his face was covered with a cold clammy sweat, and his mouth was firmly closed. By means of a stomach-pump about five ounces of fluid, smelling strongly of carbolic acid, were drawn from the stomach, which was then washed out thoroughly with several quarts of water. The patient then regained consciousness. The urine had a grayish-brown color for one day only. Strange to say, a cystitis, from which the patient was suffering, improved markedly under the influence of the carbolismus.—*Centralblatt f. Chirurgie.*

HOSPITAL LIBRARIES IN PARIS.—Three of the Paris hospitals are in possession of libraries for the use of the patients, which were established with funds bequeathed for the purpose by Dr. Ernest Godard, a former hospital interne, who died in Jerusalem in 1862. As these libraries have been found to fill a much needed want, two brothers of the deceased physician have determined, as a mark of respect to his memory, to establish a similar library in the new Hôtel Dieu, in Paris. The necessary funds for the undertaking have been deposited in the hands of Dr. Passant, Dr. Godard's executor.

ARSENIC IN PAPER CIGAR-HOLDERS.—Prof. Jäderholm, of Berlin, has discovered arsenic in dangerous quantities in the pasteboard cigar-holders that are much used at present in Germany. The poison was found in the form of Schweinfurt green, not only in most of the holders which were colored green on the outside, but also in the inner layer of paper in holders which were externally of different colors. The professor earnestly warns smokers against the use of these holders, as the poison they contain is brought into the closest connection with the buccal mucous membrane and the saliva, and thus finds its way into the blood both from the mouth and the stomach.—*Allg. Med. Cent. Zeit.*

A FATAL PRESCRIPTION.—A woman died recently in a small town of Thuringia, of an overdose of opium, which was administered on a physician's prescription. In prescribing laudanum he had neglected to put the sign "gtt." beside the figure "15," and the druggist's apprentice had put up 15 grammes (nearly half an ounce) instead of 15 drops. The physician, the druggist, and the apprentice were indicted for having caused the death of the woman by negligence, and the first was condemned to one month, the second to two months, and the third to three months' imprisonment.

TREATMENT OF OBESITY BY ARSENIC.—Dr. J. T. Whittaker states that he has employed arsenic with success in the treatment of four cases of obesity. One case was so severe that the patient fainted on the slightest movement; he had gained forty pounds in three months. He had no valvular lesions and had never had rheumatism. After the failure of all other methods of treatment, he was put on five drops of Fowler's solution three times a day. In two months he was restored to health, could walk well, and had lost much of his *embonpoint*. In the three other cases, two of which were complicated with asthma, the effect was also decisive but less rapid.—*Cincinnati Lancet.*

DR. ERNST REISSNER, Emeritus Professor of Anatomy in the University of Dorpat, died on September 4th, in the castle of Ruhenthal, Curland, after long and severe suffering. He was widely known as a writer on Histology and Comparative Anatomy.

AN ARABIAN PROVERB.—"The world is sustained by four columns: the justice of the great, the prayers of the good, the valor of the brave, and the science of the doctor."

BROMIDE OF POTASSIUM AS A DIURETIC.—In the case of a gendarmes suffering from albuminuria and uræmic convulsions, Dr. Sohier administered bromide of potassium in doses of 30 to 45 grains. Free diuresis was produced, between two and three quarts of urine being passed in one night, and the albumen, which was previously present in large quantities, disappeared entirely. In three other cases the bromide produced similar diuretic effects. Its diuretic action is exerted on healthy persons also.—*Centralblatt f. Chir.*

THE JEWS IN HUNGARY.—In the Hungarian Chamber of Deputies, a M. Istrezy recently delivered a long address on the subject of the dangers which menace the Magyar nationality from the side of the Jews. There are at present 710,000 Jews actually residing in Hungary, and, according to M. Istrezy, they are increasing at a rate which would make their numbers 1,100,000 in 1900, 2,200,000 in 1930, and 17,600,000 in 2020. One cause of the rapid increase of the Jewish race—still according to M. Istrezy—is to be found in the fact that the cholera spares the Israelites, while it scourges the Christians. Even the *black pest* of 1348 left the former almost untouched, while it swept off the latter in swarms. Whatever may be thought of M. Istrezy's statements, it is certain, from comparative statistics, that the Israelites bid fair soon to become the most numerous class in Poland, Hungary, Roumania, and most of the Danubian nationalities.

Original Lectures.

LECTURES ON CLUB-FOOT.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK (SPECIAL COURSE).

BY JOS. C. HUTCHISON, M D.,

VISITING SURGEON TO THE BROOKLYN CITY HOSPITAL; SURGEON-IN-CHIEF TO THE BROOKLYN ORTHOPEDIC INFIRMARY; CONSULTING SURGEON TO THE KINGS COUNTY, ST. PETER'S AND ST. JOHN'S HOSPITALS, ETC.

LECTURE II.

THE *causes* of club-foot have been a subject of considerable controversy, but the scope of these lectures and the strictly practical character which I propose to give them, will not permit an extended notice of the various theories that have been propounded to explain the etiology of this deformity. The question is one of scientific interest rather than of practical importance. If I may be permitted to advance an opinion, I should say that both the congenital and acquired forms of talipes depend upon some irritation of the cerebro-spinal centres causing convulsions in the fœtus as well as in a newly born child, which result either in muscular contraction or motor paralysis. There is, however, this marked difference, that in the congenital form there is, in a majority of cases, spasmodic muscular contraction and in the non-congenital cases there is nearly always paralysis of certain muscles or groups of muscles; in the former also fewer muscles are involved than in the latter.

Many orthopedists favor the theory that congenital deformities of the feet depend upon malposition and pressure of the fœtus in utero, while mothers delight to refer physical imperfections in their offspring to the influence of material impressions, and midwives narrate such cases with circumstantial evidence of astounding conclusiveness.

Congenital talipes is often hereditary, and numerous cases might be cited in which mothers have given birth to several club-footed children, and in many cases the hereditary tendency has existed even through several generations. The following illustration, which probably gave rise to a serious domestic trouble, is one of a number furnished by Lannelogue (On Congenital Club-foot, Paris, 1869):

"*5th Observation.*—The case related by Bruckner was attended with unpleasant circumstances: Vannier is club-footed, his wife is not; their first three children were club-footed, the fourth was not; Vannier accuses his wife."

It is an interesting fact, which cannot be satisfactorily explained, that the number of cases of club-foot is much greater among males than among females, while the two feet are liable to be attacked with nearly equal frequency.

In some cases of talipes certain *complications* are found to exist which also demand attention. The inversion of the toes in talipes varus does not always depend upon the malposition of the foot in the transverse tarsal articulation. In the knee-joint we sometimes find a great laxity of all the ligaments, and the knee can be bent in any direction with great facility. In consequence of this, the leg turns inward as well as the foot in the act of walking, and this continues even after the foot has been returned to its normal shape. This complication should be noticed and attention called to it at the commencement of the treatment, for it renders the after treatment tedious and troublesome. Some cases are also complicated by an extreme rigidity of the ligaments of the knee, a rigidity so great that the leg is fixed in one posture and can neither be flexed nor extended. These conditions should not escape the surgeon's attention, for they materially modify the prognosis and duration of the treatment.

In regard to the prognosis in talipes, you must also remember that the severity of the case depends not so much upon the degree of the deformity as on the resistance offered to the restoration of the foot by manipulation to its proper form and normal position. In some apparently severe cases the distortion is easily overcome by manipulation, whilst others, presenting the same grade of deformity, are much more rigid and unyielding.

TALIPES VARUS.

I will now consider the different forms of club-foot, beginning with congenital talipes varus, the variety of club-foot most frequently met with at birth, and that which has received the largest share of attention from orthopedic surgeons. Talipes varus consists in the adduction of the foot by the tibialis anticus, the raising of its inner border, the semi-rotation of its inner half by the action of the tibialis posticus, and the elevation of the heel by the muscles of the calf. This is the ordinary type of the deformity, but there are several grades of distortion which are characterized by the extent of the deviation of the foot from the normal position.

In the mildest grade of varus, which is comparatively rare, there is only a slight inversion of the anterior part of the foot, and the heel is not materially elevated. This variety is well illustrated by these casts (Figs. 5 and 6). But the grade which is ordinarily seen is shown in this cast (Fig. 7). The elevation of the heel, you observe, is more decided; the

FIG. 5.

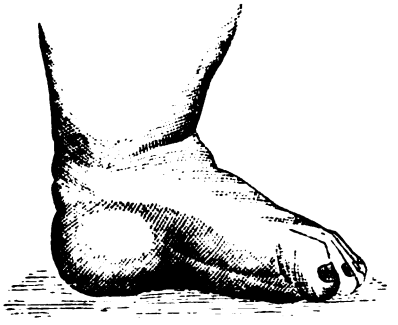

FIG. 6.

anterior part of the foot is turned inward, so that it forms a right angle with its normal axis, the sole is turned backward and the dorsum directly forward,

FIG. 7.

placing the inner border of the foot upward and the outer border downward. The inner malleolus is almost obliterated; the external, on the contrary, is more prominent than natural, and seems to be placed behind and below its usual position. A still more exaggerated degree of distortion is illustrated by this cast (Fig. 8); but fortunately this degree of deformity is not often

FIG. 8.

met with. The inner edge of the foot, you see, is drawn upward, so that the navicular and internal cuneiform bones lie in contact with the inner ankle, and the toes are turned directly upward; the dorsum of the foot is directed forward, the heel is drawn up; there is often rigid contraction of the plantar fascia, which produces shortening of the foot, and a deep transverse depression in the sole.

Where a club-foot has been used for some time in walking, the pressure of the weight of the body produces important consecutive changes. The weight of the body, instead of being transmitted through the arch of the foot, which is so beautifully designed by nature to receive it, is thrown upon the external border, and in the severe cases the child walks even on the dorsum of the foot, owing to the doubling into the sole of the fourth and fifth metatarsal bones. A soft cushion of fat and cellular tissue is formed on the back of the foot, which enables the weight of the body to be borne with comparative ease and comfort. The ankle-joint and the joint between the bones of the foot become stiff from disuse, on account of the rigidity of the tendons and ligaments which connect them together. The narrowing of the transverse arch of the foot produces a well-marked longitudinal furrow in the sole, which terminates at the junction of the middle with the posterior part of the foot ("the transverse tarsal articulation") in an obliquely trans-

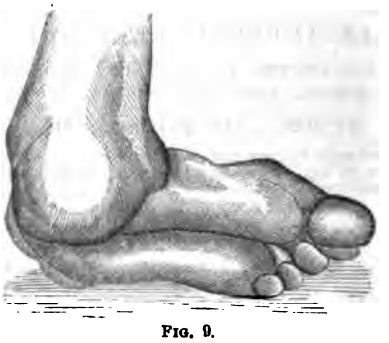

FIG. 9.

verse depression. These depressions are absent or are but slightly marked in non-congenital cases. The

FIG. 10.

casts before you illustrate the appearance of the deformity (Figs. 9 and 10).

ANATOMY OF CONGENITAL TALIPES VARUS.

The appearances presented on the dissection of a case of varus depend on the degree of the deformity and the age of the subject. In all cases, however, the structures which enter into the composition of the limb undergo degeneration from want of proper use. The *bones* become lighter and the limb is often shortened to the extent of half an inch or an inch. The *ligaments* become adapted to the altered position of the bones. The *muscles* atrophy little by little, and they remain small even after the limb has been restored to its normal form and the functions of the muscle restored.

In the severe forms of varus important deviations from the natural form and position are observed in some of the tarsal bones. This is especially noticeable in the *astragalus*, the *os calcis*, and the *os naviculare*. The astragalus assumes an oblique direction downward and forward; its superior articulating surface becomes almost vertical, so that only the posterior two-thirds are in contact with the articulating surface of the tibia. The anterior third can be felt on the dorsum of the foot, covered only by the elongated capsular ligament of the ankle-joint and the skin. Owing to the displacement of the scaphoid bone inward, the outer portion of the anterior articular head of the astragalus can be felt on the dorsum of the foot; the external articular facet is in close contact with the fibula, the internal is imperfectly developed, and its contact with the inner malleolus is

slight and imperfect; the neck is turned inward, and it is this obliquity chiefly which gives the characteristic inversion of the foot that distinguishes the deformity. The astragalus has no muscle inserted into it or taking its origin from it. The changes in form and position which it undergoes take place as a consequence of the mechanical forces operating on the other two principal bones of the foot, to which it is accurately fitted, and whose movements it must follow. The os calcis likewise occupies an oblique, and in aggravated cases nearly a vertical position, from the elevation of its tuberosity by contraction of the triceps muscle; the tuberosity is inclined towards the fibula, and in severe cases is found in actual contact with it. The anterior extremity is directed obliquely forward and inward. The bone sometimes becomes arched in its long axis, the convexity being directed outward. The *scaphoid bone* is drawn forcibly inward and upward, so that its tuberosity lies immediately under and in contact with the inner malleolus, and its long axis is parallel with the long axis of the astragalus and also of the leg. The position of this bone has the greatest influence in determining the grade of the deformity. The other tarsal bones, viz., the *cuboid* and the *cuneiform*, remain very nearly in their normal positions—they are directed inward to correspond with the inclination of the os calcis and navicular bones. In adult cases of club-foot, however, the cuboid bone becomes prominent on the dorsum of the foot, which is turned downward, and supports the weight of the body in walking. The *muscles* chiefly concerned in producing congenital talipes varus are those of the calf of the leg and the tibials. These are rigidly contracted, while the peronei and the extensor longus digitorum are lengthened and kept on the stretch. By far the most powerful of these muscles, and the most important in the production of the deformity, is the triceps suræ, consisting of the gastrocnemius soleus and plantaris, which, through the tendo Achillis, has a common insertion into the tuberosity of the os calcis. It has been shown by the experiments of Duchenne (de Boulogne*) that the action of the gastrocnemius and soleus muscle is first, to extend with great force, not merely the posterior part of the foot, but also the external half of the anterior part; and second, the moment the astragalus reaches its extreme point of extension, the muscle causes the os calcis to glide on the articulating facets on the under surface of the astragalus in an oblique direction from behind forward and from within outward. This slipping of the os calcis on the astragalus produces a double movement of rotation of the os calcis on its greater axis, and on the axis of the leg, causing adduction of the foot and the turning outward of its dorsal surface. The triceps sura is, therefore, "an extensor adductor," and each one of you can demonstrate this double function of the muscle by applying the poles of a Faradic battery over its course. You will observe that the contractions of the muscle under the influence of the electric current produces, first, extreme extension of the foot in its tibio-tarsal articulation; it then rotates it, so that its point is directed inward and the heel outward; at the same time it is turned on its antero-posterior axis, its external border is still further lowered, while the inner border is elevated. The result is, the sole of the foot faces inward. You can now understand that the permanent contraction of the triceps suræ is sufficient of itself to produce slight cases of talipes varus. The *tibialis posticus* muscle, which is inserted with the scaphoid bone, and the *tibialis anticus*, which has its insertion into the internal cuneiform and first metatarsal bones, by their contractions lift the inner border of the foot and rotate it inward, and thus become powerful agents in the production of the deformity. The tibialis posticus is sometimes so much contracted that its tendon is forced out of the groove behind the internal malleolus and is situated on the outer side or even in front of this process; and, instead of running obliquely downward and forward towards its insertion into the navicular bone, as in the normal foot, it passes directly downward from the inner malleolus to its insertion into the displaced navicular bone. (Adams.) It is important to bear in mind these altered relations of the tendon when it is to be divided. The tendon of the tibialis anticus muscle, at the point where it is usually divided, as it crosses the ankle-joint, is very much displaced inward. The *ligaments* which bind together the different bones of the foot, and in some cases the plantar fascia, especially its inner portion, contribute materially to keep up the deformity and to resist the reduction of the foot to its normal position. When the foot has been for a long time in a deformed position and its motions have been greatly restricted, the ligaments and aponeurosis adapt themselves to the altered position of the bones. The ligaments become shortened on the contracted side and lengthened on the convex side of the deformity. In some severe cases the ligamentous adaptation and contraction is so firm on the concave side as to resist the efforts to restore the foot to its normal position, even after all the contracted tendons have been divided. Langenbeck says that it is not the muscles that offer the greatest resistance, but the ligaments and the contraction of the connective tissue. In some cases—those that originate at an early period of uterine life—there is not merely a mechanical resistance to the reduction of the deformity, but there is also an elastic power in the different tissues which is more marked in the contracted ligaments than in those which have been overstretched. This is one of the most frequent causes of relapses in conducting the treatment of this deformity. The mechanical forces to be overcome are, you will please remember, the contracted muscles of the leg, the contracted ligaments on the concavity of the foot, and in some cases the shortened plantar fascia.

* D'Electrization Localisée, par Duchenne (de Boulogne) Paris, 1861.

TRANSFUSION OF MILK VERSUS TRANSFUSION OF BLOOD.

CLINICAL LECTURE DELIVERED AT CHARITY HOSPITAL, NOV. 9TH.

BY JOSEPH W. HOWE, M.D.,

CLINICAL PROFESSOR OF SURGERY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF NEW YORK.

LECTURE I.

(Reported for THE MEDICAL RECORD.)

TRANSFUSION OF MILK IN EXHAUSTION FROM EXCESSIVE HEMORRHAGE — TRANSFUSION OF MILK IN PHTHISIS—EXPERIMENTS UPON ANIMALS.

GENTLEMEN:—Transfusion of milk is becoming a fashionable operation. It is said that its effects are just as good as those obtained from blood. It is recommended by some of our principal men as a substitute for blood, in all cases where the vital forces are lowered by severe hemorrhages, or debilitating diseases. The operation, however, has yet to run the gauntlet of professional criticism and professional

jealousy before it can be generally adopted in cases where transfusion of blood was formerly tried.

Although I have used milk in transfusion several times, and was the first in this country to employ it as a substitute for blood, I have not yet made up my mind as to its efficacy. It may possess all the restorative powers claimed for it, but I confess to some doubts on the subject, which I hope to remove or confirm during the present course by a critical and careful comparison of the effects of milk and blood in transfusion. I will operate sufficiently often to determine positively whether milk is equal or inferior to blood. You will all have an opportunity of witnessing the peculiar results of each injection, and will also be kept informed of the results of every operation.

In order that you may study these effects intelligently, I will give you, in a few words, the results of previous experiments made by myself and others, to determine the value of milk in transfusion.

In 1850, Dr. Hodder, of Toronto, treated three cases of Asiatic cholera by intravenous injection of milk. The patients were in the stage of collapse; one died and two recovered. Dr. H. considered the recovery to be due solely to the injection of milk, which not alone diluted the thickened blood, but furnished nutriment to sustain the failing strength.

The operation was not performed again until the year 1873, when I performed it in Charity Hospital, on a patient suffering from tubercular disease of the stomach and mesentery, which prevented him from retaining either solid or liquid aliment. He was in a very low condition when I first saw him, literally starving to death. It was evident to all who saw him that he would last but a few days. I intended using blood in the case, but not being able to obtain any for the operation, I procured some goat's milk in the city and had it carried over to the hospital. I opened the cephalic vein of the left arm and injected about four ounces of milk. The operation was attended by vertigo, dimness of vision, twitching of the eyeballs, and dyspnœa. On the evening of the same day the house-surgeon injected four or five ounces more. The milk used by him had been in the ward all day. I wish you to remember this fact, as it has some bearing on certain other experiments which will be spoken of hereafter. The morning following the operation I saw the patient again. He said he felt better, but I could see no improvement. There was nothing whatever in his condition to justify another operation. Death took place on the fourth day.

In 1875, Prof. T. Gaillard Thomas removed a large ovarian tumor from a patient in Brooklyn. Some days after the operation she had several severe hemorrhages from the uterus, which brought her to death's door. She was sinking rapidly when Dr. Thomas saw her. He determined to transfuse milk. Accordingly, eight ounces of fresh milk, not more than five minutes from the cow, were injected into the median basilic vein of the moribund patient. To make the story short, she recovered rapidly, and six weeks from the date of the transfusion she was able to go about and attend to her ordinary duties. Prof. Thomas attributed the recovery to the restorative influence of the injected milk.

On learning of this exceedingly interesting case from Dr. Thomas, I concluded to renew my experiments in the same direction, and a day or two after I operated on a patient in the last stage of phthisis in St. Francis. In this case I opened the internal saphenous vein of the right leg, and injected six ounces of milk which had been taken from the cow three hours previously, and which seemed perfectly pure and sweet. During the operation the patient complained of intense pain in the lumbar region, his eyes twitched from side to side (nystagmus), and towards the last his respiratory movements were spasmodic and difficult. All these unfavorable symptoms disappeared in a few minutes, and the patient walked down stairs to his ward. He seemed to have suffered nothing from the operation in any way. Four hours afterwards, however, he became comatose, and died at 4 P.M., five hours after the transfusion. A post-mortem examination was made, but no cause for the coma was discerned. There were no clots in the heart, great vessels, or lungs. There was no indication that the injection of milk had caused death. Both lungs contained large cavities.

After this I repeated the operation on several dogs, with peculiar results. The milk injected into the veins of these animals was about two hours old. It seemed, as in the previous case, to be perfectly fresh and sweet. It gave no evidence of any abnormal change.

Dog No. 1 was a poor, ill-fed animal. Eight ounces of blood drawn from the femoral artery sufficed to produce syncope. Before consciousness returned, seven ounces of cow's milk were injected into the femoral vein. The passage of the liquid into the circulation caused irregular and gasping respiratory movements, and *nystagmus*. These symptoms, however, disappeared in a few minutes. The pulsations of the heart grew stronger, and a small quantity of blood having a whitish color escaped from the cut end of the femoral artery. This showed plainly that the milk had passed through the pulmonary capillaries into the general circulation without difficulty. After ligature of the artery, the dog was removed from the table. Death occurred seven hours after the operation. No post-mortem examination was made.

No. 2 was a large, well-fed slut. She was placed under the influence of chloroform, and the femoral artery was cut. Eleven or twelve ounces of blood escaped before the heart's action was noticeably affected. Eight ounces of milk were injected as before, accompanied, too, by the same difficult respiratory movements and twitching of the eyes. The animal recovered in a short time, and was able, with a little assistance, to get off the operating table. Death took place ten hours after the operation.

A post-mortem examination showed that the lungs were extremely pale and anæmic. No clots were found either in the pulmonary artery or lungs. The heart was firmly contracted, and contained a small quantity of dark blood in a fluid state.

No. 3 was a small but vigorous black and tan dog. Chloroform was administered, and the femoral artery cut. Eleven ounces of blood came away before the current ceased. Six ounces of milk were injected. During the injection the respiratory movements almost ceased, and the respiratory sounds heard on auscultation were very loud and harsh. Death took place ten minutes after the operation. A post-mortem examination was made immediately. The lungs were pale and contained neither blood nor milk. The heart was contracted, and the right auricle and ventricle contained about a tablespoonful of milk mixed with blood. The liver was enlarged and of a milky color. On cutting into it about three ounces of milk, slightly colored with blood, flowed from the cut surfaces. When this was collected the blood separated from it and sank to the bottom of the vessel, leaving the milk of a natural color on the surface. The spleen

was dark colored but contained no milk. The accumulation of milk in the liver is a curious circumstance and is not easy of explanation. The milk was injected through the femoral vein; there was no communication between the portal system and the femoral or iliac veins. There was no milk in any of the vessels, but it was all in the liver. It seems to me that the milk must have regurgitated from the right side of the heart into the inferior vena cava, and from thence found its way through the hepatic veins into the liver.

No. 4 was a medium-sized healthy dog. Chloroform was again employed. Nine ounces of blood flowed from the artery before the current ceased. Eight ounces of milk were injected; the dyspnœa accompanying its introduction was more marked than in any of the previous cases, and there were added to it convulsive twitchings of the muscles of the head and neck. Death occurred five hours after the operation. The post-mortem appearances were the same as in the second case.

No. 5 was a very large and powerful animal. When the femoral artery was opened sixteen ounces of blood came away before the flow ceased. Ten ounces of milk were injected with the same characteristic effects as before mentioned. The dog got off the table without assistance and did not seem to be much affected by the operation. Death occurred eight hours subsequently. The post-mortem appearances were the same as in the 2d and 4th cases.

No. 6 was a medium-sized dog in good condition. Ether was used to produce partial anæsthesia. Eleven ounces of blood produced syncope. Eight ounces of milk were injected. Death took place six hours after the operation. Post-mortem appearances were the same as found in the previous case.

No. 7 was a counterpart of No. 6, both as regards operation and results.

No. 8 was a large dog, with little flesh on his bones. At least twelve ounces of blood flowed from the femoral before syncope occurred. No milk was injected. The dog recovered.

No. 9 was operated on in the same manner. The amount of blood lost before syncope occurred could not be estimated, as the animal was running around the floor while the bleeding was going on. No milk was injected. On the fourth day after the operation he seemed to be in perfect health. My assistant, Dr. Saunders, killed him on that day because of his biting propensities.

Now we have here seven dogs bled to a state of syncope, and milk injected, with not a single recovery. We have two dogs bled in the same manner—no milk injected—and recovery in each case. There is only one conclusion to draw from this: that is, the milk killed the dogs. Prof. T. G. Thomas is decidedly of the opinion that the milk was decomposed, and the animals poisoned by it. He may be right. But it seems to me hardly probable that milk should decompose in the short space of two hours sufficiently to act as a deadly poison when thrown into the circulation. Besides, you will remember that, in my first case, the milk remained in the ward *all day* before the second injection was made. With this fact in my mind I cannot agree with Dr. Thomas. It is more likely that death was due to the *quantity* of milk injected, and not to any poisonous change. Eight ounces of milk for an ordinary sized dog would be the equivalent of thirty or thirty-five ounces of milk in a healthy adult, and I don't believe that any human being could be bled to syncope, and then have thirty ounces of milk injected with impunity. It would be certain death!

Since these experiments were performed, Prof. Thomas has operated on more cases. Two of them were reported in the *New York Medical Journal*. One of the patients had gangrene of the intestines. She lived six days, and was repeatedly transfused with milk. The second one had persistent hemorrhage from the peritoneum following an operation for ovariotomy. She was transfused twice. Death took place on the second day. Dr. Thomas is of the opinion that death would have occurred much earlier in both these cases, were it not for the intravenous injection of milk. In all, Dr. Thomas claims four complete recoveries out of seven cases. Drs. John H. Brinton and Charles Hunter, of Philadelphia, have also operated successfully in several instances, and Dr. Brinton believes that milk will ultimately supersede blood in transfusion. Now, although my own experience in the matter gives me little faith in the utility of transfusion of milk, I cannot overlook the facts presented by these gentlemen, and feel justified in making further trials.

This woman that I am about to operate on to-day is, as you can readily see, in a critical condition. She is twenty-four years old and is suffering from phthisis and syphilis. There are cavities in both lungs. Her temperature is 102° F. Pulse is 180 per minute and is thready and intermittent. The respiratory movements are gasping and number 40 per minute. She has not strength enough to speak above a whisper. Remember, however, that some of this condition is due to fright. We must deduct at least fifteen pulsations from the number given to get at the condition of the pulse before coming to the amphitheatre, and count the respiratory movements at 30 to reach the same result. The operation for transfusion of milk is the same as for transfusion of blood, and the same instruments are used. You can open the internal saphenous vein, the median basilic or cephalic veins. It makes little difference which one is opened. In this case I will open the left cephalic an inch or two above the elbow. Now I pinch up the integument over the vein and incise it with a curved, sharp-pointed bistoury. This, you see, exposes the vein; now you can either pick up the vein with a dressing forceps and make a transverse valvular opening through its anterior wall, or distend the vein by pressure above and incise it with the bistoury in the direction of the wound in the integument, making an opening a quarter of an inch in length, as I am now doing. Pressure below the opening prevents the escape of blood. Then I introduce the canula belonging to Colin's instrument; this canula is closed by a trocar, so that no air can enter. Now you can either fasten the canula in its place by means of a ligature or close the vein below in the same manner, but there is no necessity for this. Pressure with the thumb and forefinger will do as well. This part of the work you can entrust to your assistant.

[At this point a goat was brought in and milked. The milk was strained through carbolized gauze into a glass vessel placed in warm water at 107° F. Colin's instrument, previously immersed in warm water at the same temperature, was then filled with the fresh milk. A small portion was forced out through the rubber tube and canula to expel the air. The trocar was drawn from the canula in the patient's arm, and the smaller canula attached to the instrument fitted in its place. Nearly four ounces of milk were then slowly injected. When the first ounce was thrown in, the respiratory movements went up to seventy per minute, and the pulse could scarcely be felt. The operation was suspended for a few moments while the patient recovered from its effects. The second ounce or two caused the respiratory movements to cease for a

moment. Pressure in the epigastric region was made until they were again resumed. The same results ensued when the last ounce was thrown in, and the operation suspended. About half an hour after the transfusion the patient seemed to be much improved. The spasmodic respiratory movements had disappeared, and the pulse had fallen to 120.]

Original Communications.

THE SCIENTIFIC LESSONS OF THE MOLLIE FANCHER CASE.

By GEO. M. BEARD, M.D.,

NEW YORK.

NEWSPAPER discussions of novel and abstruse problems in science are so unsatisfactory and exasperating, that it is pleasant to take the case of Mollie Fancher out of popular into scientific circles.

From a scientific point of view, this case has a threefold interest, and is worthy of far more attention from neurologists than it has yet received.

1. As illustrating the phenomena of trance and the automatic side of the nervous system.

2. As illustrating the worthlessness of average human testimony in matters of science.

3. As enforcing the necessity of the reconstruction of the principles of evidence on the basis of the physiology of the brain.

In not one of these three relations is this case, however, exceptional or unprecedented.

There have been hundreds, if not thousands, of cases similar in kind, though differing more or less in degree.

Within the last month I have been consulted in regard to two cases, in which both the real and accredited phenomena are in many respects precisely the same as those of the Mollie Fancher case, including starvation, hysteria, trance, and the claims of prophecy, clairvoyance, and mind-reading, the main difference being in the extent of time through which the phenomena were extended.

While it is unfortunate for the cause of science, that the friends and physicians of Mollie Fancher have been unwilling to submit the case to expert and exhaustive investigation, yet it is doubtful whether there is any country in the world, outside of Germany, where public sentiment would allow such investigation as this case demands.

In order to learn just how long a person in this hysterical, oftentimes entranced, condition can live on a small quantity of liquid or other food, it is necessary to have the case taken entirely out of the hands of friends and kept under the eye of experts, night and day, constantly for a number of months. Anything short of this would be useless and unsatisfactory, and would leave the subject where it found it—undetermined. In the present state of our knowledge of the physiology and pathology of the nervous system, no one probably would venture to name the minimum quantity of nourishment that would suffice to sustain existence in an hysterical and entranced patient.

My own studies of this subject, make it reasonably certain to my own mind that even those that are not hysterical, or liable to trance, may, during prolonged illness, subsist on liquid nourishment alone considerably longer than is generally believed; but only such an investigation as is here suggested can give the problem a definite solution for any given case.

The starvation side of this case is, however, its least interesting and least important feature.

We have not in our profession a more honorable or able body of men than some of the Brooklyn physicians who have been directly or indirectly connected with the case of Mollie Fancher: and yet the instincts of the majority, both of general practitioners and specialists of nervous diseases, reject all of their testimony relating to the claims of clairvoyance, mind-reading, and prophecy. Studying the subject through the reason, we know deductively by the law of biology that no member of the human species can have any quality different in kind from those that belong to the race; hence, to investigate such claims or to offer money rewards, as the French Academy has done, for them is unscientific. By this same process of reasoning, from the established laws of astronomy, of chemistry, of physics, of mathematics, the claims of astrology, of alchemy, of perpetual motion (Keely motor and Winter motor), of squaring the circle, have been absolutely disproved. Mollie Fancher is the Keely motor of physiology. Any expert, by half an hour's experimenting with this or with any similar case, could easily show that her claims in these respects were the result of intentional or unintentional deception; but we know that already, and such experiments would add nothing to science, and therefore should not be made, save as an amusement, or as a means of impressing the popular mind, which is unable to grasp the significance of biological laws. In order to be an expert in cases of this kind, it is not enough to be a man of common sense—which, as has been well said, is a synonym for common ignorance; it is not enough to be honorable and truthful; it is not enough to be a man of general scientific attainments or even genius; it is not enough to be a physician of experience and skill; it is not enough to be a specialist in the diseases of the nervous system; it is necessary to have studied both theoretically and practically this side of the nervous system—the involuntary life in health and disease, including trance, and the reciprocal action of mind and body.

These subjects, as well as the science and art of experimenting with living human beings, are not yet taught in medical schools, nor in works of physiology nor of general or special medicine that deal only with the past; they belong to the science of the present and the future, and are mostly confined to monographs that few read and few comprehend; and no one is to be blamed for unfamiliarity with them. Experts in this department ought to come, and in time will come, from the medical profession and those interested in the nervous system; but two of the very best experts that I know of in this department are laymen, both of whom have given time to the study of the nervous system, and are capable of dealing theoretically and practically with cases like those of Mollie Fancher; and in any experiments that they should make with living human beings, all the six sources of error—intentional deception on the part of the subject, unintentional deception on the part of subject, intentional collusion of bystanders, unintentional collusion of bystanders, chance and coincidence, the phenomena of trance, and the involuntary life—would be eliminated, and, to my mind, their conclusions would be, in a degree, authoritative. How a neurologist of world-wide and justly-earned reputation may blunder in experiments with living human beings is illustrated at the present time by the gro-

tesque performances of Charcot and his coadjutors in his researches with metals, magnets, and mesmerism, on the hysterical patients in the Hospital Salpêtrière. Worse experiments in the name of science never were made, not even by the Committees of the French Academy in the early days of Mesmer—than these which now, under the auspices of Charcot, are exciting the astonishment and the wonder of scientific Europe. Charcot's mistake consists simply in not eliminating the six sources of error; consequently, in most of his experiments—according to his own reports of them—false conclusions are so numerous that they crowd each other, and completely block the pathway to the truth.

The analogies of the case of Mollie Fancher to the Salem witchcraft excitement are, up to a certain point, striking and instructive. The Salem delusion originated in three or four young girls, in whom hysteria, trance, malice, and mischief were so intermingled that they were supposed to have been bewitched. The honest and good physician who was called in made a diagnosis of the "evil eye"—that is, endorsed the belief of their friends; the clergymen followed with the hallelujahs, and the judges with their wise decisions. All the rest was, in that age, a logical sequence. The extreme character of the Salem excitement, by the law of reaction, broke the force of the belief in witchcraft, which for centuries had dominated the civilized world, although the human testimony in its favor was stronger than ever. Clairvoyance, with its allied delusions, is the witchcraft of the nineteenth century, and the excitement in regard to the Fancher case by the very extravagance and stupendousness of its claims will do more than any course of abstract reasoning could possibly have done to hasten its decline. Delusions, like all else in nature, seem to move in rhythm. They have their periods, their lulls, their lucid intervals, their exacerbations. This is, I believe. the third time in a few years that a wave of excitement in regard to Mollie Fancher has rolled over the land. Scores of times during the past few years have I been requested and urged to investigate her case. At one time these requests were so numerous and earnest that I conferred with Dr. Speir in regard to it. While politely declining to allow me the privilege I sought, yet, in our conversation, he took, so far as he went, a scientific position, making no unphilosophical claims, and freely admitting that, in spite of all that had been done or written, the case had never been scientifically investigated, and intimated that, with his consent, it never would be. To friends and acquaintances of the family who have spoken to me in regard to the subject, I have replied almost uniformly that if they could induce the patient or her relatives to submit to scientific investigation, I would cheerfully co-operate with her physicians. One who knows, or professes to know, the family very well, and who desired me to study the case, lately declared in substance that no earthly power could avail to open the doors to a scientific investigation.

This personal explanation is made as a reply to certain communications recently received, reproving me in language always earnest, enthusiastic, and sincere, but sometimes the reverse of polite, for not subjecting this case to inductive scrutiny.

The care with which this case of Miss Fancher has been walled about and closed against the investigation or visitation of all those interested in these phenomena of the nervous system is not in any way peculiar to this case; so far as I have observed, all cases where claims of this kind are made—and hundreds have been brought to my attention—are similarly guarded; fear of experts is one of the symptoms, almost pathognomonic. A short time since an intelligent and esteemed medical friend desired me to assist him in studying experimentally the claims of seeing without eyes in a lady of his acquaintance. As an accommodation and an evening's amusement I consented, on the condition that it should not be known that I was especially interested in the subject. The result of the examination was to show that this educated and accomplished lady, the wife of a prominent professional gentleman, and moving in good society, had for years been intentionally deceiving not only her intimate friends, but even her husband and physician; and no persuasion could afterwards induce her to repeat the tests in the presence of her physician and myself, although she had repeatedly promised to do so.

The phenomena of trance, as illustrated in this case, are genuine; and it is evidence of the carefulness with which this branch of science has been avoided that while the unnatural and impossible claims of a sixth sense are received, the real and demonstrable facts of trance are disallowed.

In ordinary neurological language this case of Miss Fancher would be designated as hysteria of a traumatic origin, with contractures and attacks of ecstasy, which, like catalepsy, is but another term for one of the many phases of trance. In this diagnosis there would probably be little difference of opinion among those specially interested in such cases. The symptoms of trance are numerous and complex, but they are not mysterious; they can be explained and are explained, and are shown to obey the rule of law as truly as the symptoms of small-pox or typhoid fever.

Unsought-for evidence has been brought to me from various quarters—from physicians and from clergymen as honorable and as able as any whose names have appeared in connection with this case—that Mollie Fancher intentionally deceives; that she lives on the fat of the land; that the fancy articles she professes to make are made for her; that her reading without eyes is done by trickery; but all this, like the evidence on the opposite side, is of a non-expert character and can, in science, receive no consideration. The question whether the deception is intentional or unintentional is, however, one of little scientific interest, and its solution would be of no importance. Bringing probabilities to bear on the case, this may be said, that in nearly all the claims of this character that I have had opportunity to investigate, the deception was found to be intentional; the experience of other observers in Europe and this country is, I believe, the same. According to the principles of evidence, as taught in the best universities and authorities on logic and law in the world, all the claims of Miss Fancher must be accepted and without question, for better and more unanimous non-expert testimony could not well be obtained on any scientific problem. During the past ten years, however, the leading thinkers of England and Germany have been consciously or unconsciously concentrating their forces towards that point where is to be begun the work of reconstructing the principles of evidence. Such reconstruction has only recently been formally attempted, but its suggestion is found to receive earnest endorsement among those who, by previous thought and experience, are prepared for it.

Human testimony is the product of the human brain, and its scientific study belongs to those who,

like physicians, devote themselves to the study of the brain in health and disease. No profession has more frequent cause for distrusting non-expert testimony than the medical; the practice of medicine is indeed built up on the rejection of the evidence of the senses of honest non-experts. If we could trust the eyes and ears and touch of the friends of patients there would be little need of making personal visitations.

The Fancher case will have been of value, if it shall do no more than impress on the professional mind the importance of a re-study and re-building of the logic of medicine.*

POWERLESS LABOR—A FORM NOT USUALLY RECOGNIZED.

By W. E. FORREST, M.D.,

RESIDENT PHYSICIAN TO THE LYING-IN ASYLUM; ATTENDING PHYSICIAN TO THE NEW YORK DISPENSARY.

WHEN one consults the older works on obstetrics, not those of the time of Hippocrates, but standard works of fifty years ago, and compares their teaching as regards the use of the forceps with that of to-day, one is struck with the great change that has taken place in recent times.

Authorities of fifty years ago speak of the use of the forceps as guardedly as they were wont to speak of Cæsarian section, and lay down rules for their use that if followed at the present day would lay one open to the charge of mal-practice. Thus, the rule laid down by Merriman was, that "the forceps should not be applied until the ear of the child had been within reach of the operator's finger for at least six hours." And Denman's rule differs from this mainly in words; he says: "A practical rule has been formed that the head of the child shall have rested for *six hours* as low as the perineum, that is, in a situation that would allow of its application before the instrument is applied, although the pains should have altogether ceased during the time." It is not necessary to say that such rules are disregarded at the present day, and modern practitioners resort to the forceps much more frequently than Denman's rule would indicate. A very striking illustration of the change in practice as regards the use of the forceps is furnished by the reports from the Rotunda Hospital, Dublin. Between the years 1815 and 1822 there were 21,867 births at this institution, and there is no record of the forceps having been used even once during this time. Between the years 1847 and 1854, the forceps were used two hundred and twenty times, or once in every sixty-two births. Between the years 1868 and 1875, the forceps were used six hundred and thirty-nine times, or once in every eleven cases. In 1875, once in every nine cases. Thus is seen the great change that has taken place within a few years as regards the use of the obstetric forceps. The older practitioners were guided by an arbitrary "six-hour" rule. Modern practitioners have discarded this rule, but have gone, it would seem, to the other extreme, and use the forceps not unfrequently because they are unwilling to await nature's movements. Both plans, the "six-hour" rule and the premature use of the forceps, must be condemned by every conscientious practitioner, for it is not the factor of *time*, either long or short, but the factor of *power* that should determine the use of the forceps. Hence, if the "obstetrician of the future" is to render intelligent assistance to nature in the delivery of the child he must have an accurate knowledge of nature's resources so as to come to her aid at the very moment she fails, and delay becomes dangerous to either mother or child.

It is with the hope of adding something to the sum of our knowledge as regards the different forms of powerless labors, and hence of leading to a more rational and exact indication for the use of the forceps, that I present the history of the following case. In doing so I lay no claim to originality of discovery or publication. My attention was called to this subject by a paper read before the Edinburgh Obstetric Society, by Dr. Matthews Duncan. Since reading that article I have observed and recorded several cases of the form of powerless labor described in this paper, and present the case given below not as a rare and phenomenal case, but as a typical example of a not unusual form of labor.

Mrs. M., age 26, primipara; strong, healthy woman. The patient was taken in labor on August 30th, at 4 A.M. The pains were moderately strong, and recurred every fifteen minutes. Every pain was immediately followed by an act of vomiting. The bowels also moved freely, although previously she had been obstinately constipated. The patient was first seen by Dr. E. L. Partridge, who requested me to take charge of the case.

At 11 A.M. visited the patient, and found the pains rather strong, but no more frequent than early in the morning. The vomiting also persisted with each pain. The os just admitted one finger; the cervix was long and far back.

At 3 P.M. the condition of the os and cervix was the same. I concluded that labor would be postponed for one or two weeks, a not very unfrequent occurrence when the cervix is rather long and firm.

September 16th.—Two weeks from the time of the former attempt labor-pains commenced again. Saw the patient at 7 A.M., and found the cervix obliterated, and the os admitting one finger. Vertex presentation: first position. The pains were regular and strong, and, as in the previous attempt at labor, every pain was immediately followed by an act of vomiting.

At 11 A.M. visited her again, and found the labor progressing rapidly and naturally. The os was about half dilated, and the membranes ruptured. I expected the labor to terminate in less than two hours. On account of the loud complaints of the patient, and of there being a hysterical element in the case, I allowed her to inhale a little chloroform, but never enough to produce unconsciousness.

12 M.—The os fully dilated, and the head descending. 1 P.M.—The head well down in the pelvis; could just slip three fingers in between the perineum and vertex; pains strong and frequent; perineum not rigid. I promised a speedy termination of the labor if the pains continued. At half-past one P.M. the head had made no further progress. With each pain the vertex advanced nearly to the perineum, and then receded. I now tried to assist the labor by making pressure upon the abdomen during the pain.

In making the necessary manipulations, I observed the following peculiarities: First, the fundus of the uterus was very high in the abdomen, just below the ensiform cartilage, although the head of the child was well down in the pelvis. This position of the fundus I thought explained the act of vomiting that accompanied each pain. The fundus of the uterus

* For those who may wish to pursue this subject beyond these brief suggestions, and to parry the charge of dogmatism, I may, perhaps, be allowed to refer to papers on "The Scientific Study of Human Testimony," in the *Popular Science Monthly* for May, June, and July, 1878, and to a paper presented at the last meeting of the Am. Neurological Association, entitled "How to Experiment with Living Human Beings," shortly to be published in the same journal.

must of necessity press upon the stomach during each contraction.

Second: The breech of the child could be felt a little distance above the umbilicus, and some distance below the fundus uteri. Hence the uterus had, so to speak, partially slipped off from the child. Third: During the contraction of the uterus the portion of the uterine tumor, extending from the fundus to a line about two inches below the umbilicus, alone seemed to harden and rise up during a pain. Below this well-marked line the contraction of the uterus died out. This line, as I have said, was less than two inches below the umbilicus, and I judged that the body of the uterus lay above this line, and the thinned and lengthened cervix and vagina below. In an ordinary natural labor the line of the internal os can be felt a short distance above the pubes. From these observations I concluded that the body of the uterus had prematurely shortened, so that the fœtus was out of the grasp of the uterus, and hence the powerful longitudinal fibres of the uterus were of no further avail. The circular fibres unaided were unable to expel the child. I now had to inform the friends that my previous statement as to the speedy termination of the labor was a mistake, and instruments must be used. At the same time the pains were strong and frequent, and the vertex of the child was nearly against the perineum. I at once sent for the forceps; but it was three P.M. before they could be obtained and applied. After locking the forceps, I had simply to lift the head out of the mother's pelvis, and the labor was speedily terminated. The uterus contracted well, but even then remained very high up in the abdomen, so that I was compelled to push the uterus down toward the pelvis in order to apply the bandage properly.

The child was a female, weighing about eight pounds.

The lessons to be derived from this case are, it seems to me, not unimportant. First, this case shows how radically wrong and unscientific is the "time" rule for the use of the forceps. "Leaving the case to nature" for one hour, or six, in this form of powerless labor, is not only unscientific and useless, but dangerous. It is useless, because power is wanting, the uterine forces being misapplied. A premature shortening of the uterus and retraction of the internal os has, so to speak, spent the leverage of the uterus, and nature unaided cannot expel the child. Thus, in the case whose history I have given, there was a necessary delay of two hours in the use of the forceps, during which time there was no obstacle to delivery in the formation of either the maternal or fœtal parts, and the pains continued, yet no advance was made. Delay in this form of labor is dangerous. Dr. Angus McDonald, in an article on "Rupture of the Uterus," has shown that spontaneous rupture of the uterus commences usually in the cervical portion—in fact, that rupture of the body of the uterus never takes place unless previously diseased. Rupture in the cervical portion, it is evident, might occur when this portion became thin and tense from being elongated. Hence the form of powerless labor I have described is not without danger to the mother, for the great retraction of the body of the uterus stretches the cervix uteri and vagina, and makes them thin and tense.

By a very little reflection, it will be evident that in this form of powerless labor, due to a premature retraction of the uterus, ergot and such stimulants should not be given. The effect of ergot would be to cause still further retraction of the uterus, and consequent greater tension of the cervix uteri and vagina. In these cases there should be no delay in delivery. If pressure upon the fundus of the uterus during the pains does not serve to expel the child, the forceps should be resorted to at once. Usually very little traction will suffice to terminate labor.

Diagnosis.—It is important that this form of powerless labor be early recognized and carefully distinguished from the ordinary form of powerless labor arising from uterine inertia. Fortunately, the diagnosis is not especially difficult. Reference to the history of the case, as given above, will make the points of diagnosis clear. These diagnostic points I will here recapitulate:

First: The patient was a primipara. This form of powerless labor occurs most frequently in primipara, while that form due to uterine inertia occurs usually in old multipara.

Second: The pains were strong, and accompanied by expulsive efforts. The pains, too, were of the ordinary duration. In uterine inertia, on the other hand, the pains are short, weak, and discouraging.

Third: The fundus of the uterus remained unusually high in the abdominal cavity throughout the labor.

Fourth: The most important sign was the discovery of the line of the internal os uteri a short distance below the umbilicus. This line could be distinctly felt through the abdominal walls, and was regarded as being diagnostic. In an ordinary labor, this line may be felt a short distance above the symphysis pubis, and can usually be distinguished by careful manipulation. During a pain, the body of the uterus alone thickens and hardens and rises up, and hence can be easily distinguished from the cervical portion, which is thin and tense.

These few signs will enable one to distinguish this form of powerless labor from the ordinary form due to uterine inertia. The rationale of these signs, when understood, will indicate the treatment.

The treatment, it will be seen, may be entirely different in the two forms; for while in the one case, that of simple uterine inertia, we may temporize and give opium to procure rest for the patient, and later give ergot to stimulate the flagging energies of the uterus, in the other form the duty of the accoucheur to immediately deliver by manual or instrumental aid is imperative.

163 Spring Street.

Reports of Hospitals.

BELLEVUE HOSPITAL.

PERIPHERAL PARALYSIS.

At a recent clinic held in Bellevue Hospital, a man presented himself with inability to extend one hand and fingers. Inquiry elicited the fact that six weeks before he had been struck by a policeman upon the arm at some point of which he was unable to give an account.

He had been under treatment for Colles' fracture of the radius, but after removal of the splints a failure of extension power was still found to exist. An examination showed loss of power in the distribution of the posterior interosseous nerve. There was inability to extend the hand and fingers. When he grasped the dynanometer he could only carry it to thirty upon the outer scale. But at the time he grasped it complete flexion of his hand took place, due to want of antagonism of the extensors. When, how-

ever, the thumb and index finger were placed underneath the thenar and hypothenar eminences—and in that manner the action of the flexors was antagonized—he was able to turn the dynanometer almost to the same degree as upon the opposite side.

Remarks by Dr. Janeway: It seems, in a certain number of cases, that because of paralysis of the extensor muscles, whether from lead or from injury of the musculo-spiral or posterior interosseous nerve, many are led to believe that a certain amount of paralysis exists in the flexors. This, however, is chiefly apparent, and is due to the fact that there is no antagonism to the action of the flexors; hence their first action is to carry the hand to full flexion. The result is that the flexors being in that position are unable to exert their full force. If, under these circumstances, by means of artificial rubber muscles, or by adopting the expedient just shown—that of placing the thumb and finger so as to keep the hand midway between flexion and extension—it will be found that there is almost complete power in the flexors. A part of the want of power in those cases in which it is incomplete is probably due to want of complete antagonism. Of course I do not wish to claim that in no case of lead paralysis is there coincident paralysis of the flexors, because in some cases all the muscles of the body are paretic. But in the early stages of lead paralysis it does not exist to the extent claimed by some authors. I have directed attention to this point during the past four years, and am glad to see that Erb has, in his article on peripheral paralysis, in Ziemssen's Cyclopœdia, drawn attention to the same circumstance.

Progress of Medical Science.

RETENTION OF URINE RELIEVED BY CHLORAL.—Dr. Tidd reports the case of a young woman, in the ninth month of pregnancy, who had not urinated for twenty-four hours, as a result of which the bladder was enormously distended. Catheterism was tried, but failed, in consequence of the swelling and of the deviation of the urethra. Puncture of the bladder was proposed, but the patient refused to consent to it. Ten grains of chloral were then ordered every half-hour. It produced a deep sleep, during which the patient passed unconsciously an enormous quantity of urine. The evacuation commenced five minutes after the second dose of the solution. The retention did not recur, and seven days later the patient was delivered of a healthy child.—*Jour. de Méd. de Bordeaux.*

DUPUYTREN'S CONTRACTION OF THE FINGERS.—Mr. William Adams believes that the palmar fascia is the seat of this affection, and that it is due almost always to constitutional, rather than local causes, most frequently being traceable to the gouty diathesis. As the disease advances, the skin becomes adherent to the fascia, and presents the convoluted appearance which has led some to think it the seat of the disease. That this is not so is shown by dissections and by the success of Mr. Adams' method of treatment, which consists in subcutaneous section of the contractured bands. In doing this he makes use of a much smaller tenotome than those ordinarily employed, passes it in between the skin and the fascia, and cuts downward. Several punctures are made, the first near the annular ligament, the second near the base of the phalanx, and the third and fourth divide the lateral bands or digital prolongations of the palmar fascia, which usually pass from the central cord in the palm to the adjacent sides of the fingers. These should be divided very carefully, to avoid cutting the vessels and nerves at the sides of the fingers; the punctures should be made at the bifurcation of the cutaneous net between the fingers, and the incisions directed obliquely upward and outward, towards the palm. The fingers are then fully extended and a well-padded metal splint applied to the palmar surface. This is not to be removed before the third or fourth day, by which time the punctures will be found healed. The extension is kept up for two or three weeks, after which the splint is worn by night for three or four additional weeks, free motion being encouraged during the day. If partial relapse occur, and Mr. Adams has never known of more, the operation may be repeated, and the tendency to recontraction prevented.—*The Lancet*, June 29, 1878.

SUBCUTANEOUS INJECTIONS OF CHLOROFORM.—M. Besnier lays special stress on the necessity of burying the point of the needle in the subcutaneous tissue; he introduces the needle alone, watches it to see if any blood escapes (in which case he punctures in another place), and only finishes the operation when he is certain that the fluid will not be forced into a vein. In cases of sciatica he injects on the first day one syringeful over the point of exit of the nerve, and another over the middle of its course. On the following day he makes another injection over the external popliteal. It is in tic-douloureux, however, that he looks for the most valuable services from the injections.—*Lyon Médical.*

TREATMENT OF ENURESIS NOCTURNA.—Dr. Kelp has, on several occasions, drawn attention to the value of subcutaneous injections of the nitrate of strychnia in the treatment of obstinate cases of nocturnal incontinence. He practises the injections in the neighborhood of the sacrum. A single injection of a very small quantity of the drug suffices to arrest the affection for a certain time, and when it reappears, the operation can be repeated. His latest paper cites the case of a young woman, eighteen years of age, who had suffered from enuresis every night for several months; it came on first after an attack of scarlatina, and persisted in spite of all precautions. The first injection procured her a respite of several nights, and the second produced a permanent cure. The patient was a strong, healthy girl, and had never suffered from enuresis previous to the attack of scarlatina.—*Le Mouvement Médical.*

Dr. Grisolles recommends the following combination in the treatment of this affection: Extr. nuc. vom. grs. iv., ferri phosphat. grs. xlv., extr. quassiæ, grs. xxx., rad. gent. q.s. M. ft. pil. No. 25. Dose, one pill three times a day. In connection with the pills he orders cold hip-baths and abstention from fluids during the evening.

PARACOTOIN IN THE TREATMENT OF CHOLERA.—Prof. Baelz, of Tokio, Japan, treated five cases of cholera during the recent epidemic, with paracotoin, and with the happiest results. The number of cases was necessarily small because of the limited supply of the drug at hand, but the results were so striking, that the Japanese Government has determined to give the remedy an extensive trial in case another epidemic should break out. Prof. Baelz administered it by subcutaneous injection, in doses of 3 grs. dissolved in glycerine and distilled water. The following short clinical history illustrates well the power of the rem-

edy: M., a robust girl, 22 years of age, was not seen until four hours after the disease set in. She was then very apathetic, markedly cyanosed and collapsed, with cold extremities and thready pulse. Frequent vomiting; rice-water stools, passed unconsciously in the bed. At 4 P.M. 8 grs. of paracotoin were administered subcutaneously. Next passage at 5.30; 8 grs. paracotoin given internally. All the symptoms improved: the pulse became stronger and regular, the extremities regained their warmth, and the cyanosis disappeared. Cognac, 3 iss. every quarter of an hour. 8 P.M., one thin, pappy passage; 12 M., 8 grs. paracotoin subcutaneously; 1 A.M., profuse perspiration. On the following day great weakness, but patient otherwise perfectly well.—*Deutsche Med. Wochen.*

TREATMENT OF ERECTILE TUMORS. — Prof. Vermeuil, who is a strong advocate for the treatment of erectile tumors by coagulating injections, uses the precaution of compressing the circumference of the tumor with the ring of an ordinary key, for four or five minutes after the injection has been made. He recommends as an injection the following mixture: perchloride of iron and distilled water, ana, ʒ i.; chloride of sodium, ʒ i. In a recent case of erectile tumor on the arm of a child, he made four punctures, and injected only three drops at each puncture.—*Le Mouvement Médical.*

DIAGNOSIS OF AMYLOID KIDNEY. — Albuminuria, occurring in the course of long-standing suppuration, is too generally regarded as indicative of amyloid degeneration of the kidney; but chronic parenchymatous nephritis occurs under similar etiological conditions, and also gives rise to albuminuria. The difficulty of differentiating the two conditions is well known. Bartels points out that the diagnosis depends upon the distinguishing characters of the urine, which, in the former, is clear, with little sediment and few casts, mostly hyaline, and scarcely ever blood-corpuscles. If the latter it is always more or less turbid, with considerable sediment; is dirty colored, contains many casts of every variety, and not uncommonly blood-corpuscles. In those cases in which no albumen is present, there have been signs of amyloid disease in other organs; and, in order to escape error, it will be enough to know that the absence of albumen from the urine does not exclude a slight degree of amyloid disease of the kidneys.—*The British Medical Journal*, July 27, 1878.

EXTRA-ARTICULAR OSTEOTOMY FOR GENU-VALGUM. —The treatment of genu-valgum by osteotomy has occupied much attention, and Dr. Ogston, of Aberdeen, is among those who have helped to throw much light upon a very difficult branch of surgery. His method consists of making a small opening into the joint, passing in a small saw, and sawing off the internal condyle of the femur. So far this proceeding has been carried out successfully about thirty times, but it is open to obvious objections. Mr. Reeves, of the East London Hospital for Children, has just put another method into practice, and he submits that it is free from the risks to which Dr. Ogston's plan is liable. The two methods may be described respectively as intra-articular and extra-articular. His method, as described in the *British Medical Journal* for May 25, 1878, may be thus summarized: A scalpel, antiseptically prepared, was passed in obliquely just above the inner tuberosity. The periosteum was divided; then a chisel was passed in along the knife, and the internal condyle separated *as far as the condyle only*. The chisel was then used to pry the condyle inward until it was found to move moderately freely. The limb was straightened; a long splint interrupted at the knee, and with a cross-piece at the foot to keep it steady, was adjusted. As the condyle differs in shape and depth, it is of course necessary to be accurate in chiselling, and Mr. Reeves marked out with ink on the skin not only the contour of the condyle, but also the direction of the chisel-cut. The greatest depth of the condyle was marked on the chisel, allowance being made for the thickness of the cartilage and of the soft parts. The chisel was then driven home until the mark on it nearly reached the skin. The condyle having been first penetrated in its greatest depth, the chisel was partially withdrawn. Its direction was altered—first forward, then backward; and by a few oblique touches, due allowance being made for the varying depths, the condyle was felt to be sufficiently loose, when the instrument was withdrawn. It might be thought that the uncut cartilage, with perhaps some slight uncut bony ridges, would either interfere with the reduction of the deformity, or would only yield after being broken. The result does not confirm these objections. But even if the cartilage were to fracture, or even if the point were entered, the proceeding would not be so severe as if done with a saw. It is more correct to say, not that the internal condyle was separated, but that the greater part of it was *almost* separated—that is to say, that the chisel did not extend to the intercondyloid groove, but only to its inner side. The aim of this is to preserve some part of the inner condyle which may grow, and thus obviate any possible future *genu extrorsum*, which may be the consequence of the increased growth of the external condyle. The advantages of the extra-articular method seem to be greater rapidity of execution rendering it more strictly subcutaneous, much less damage to the bone, cartilage, and soft parts, no interference with the joint; and, as the condyle is not completely separated, there is less likelihood of subsequent non-union and necrosis.—*The Dublin Journal of Medical Sciences*, July, 1878.

UNEQUAL LENGTH OF NORMAL LIMBS.—Dr. John B. Roberts has made accurate measurements of the femurs and tibias of eight skeletons, for the purpose of determining the comparative length of the normal limbs. The extreme length of the bone was taken, the measurement being made by an instrument similar to a shoemaker's rule. In one case the tibias were not measured, owing to one malleolus being broken, but the femur on the right side was one-sixteenth of an inch longer than its fellow. In none were the limbs of equal length, the difference varying between two-sixteenths and twelve-sixteenths of an inch, the average being about six-sixteenths. In two cases the tibias were equal, but the femurs were always irregular. It was doubtful whether the tibias of one skeleton belonged to the same individual. These measurements are of interest in connection with fracture, and in medico-legal questions.—*The Medical Times*, Aug. 3, 1878.

CASE OF SCIATICA TREATED BY NERVE-STRETCHING. —Dr. Macfarlane, of Kilmarnock, reports a case of sciatica successfully treated by nerve-stretching. The case existed from January 26, 1877, to November 3, 1877, uninfluenced by any treatment, when nerve-stretching was proposed and performed. The nerve was thoroughly stretched, although the leg was not raised from the table. Immediate relief was afforded, and no relapse has as yet (eight months) taken place. Antiseptic precautions were observed, and union by first intention obtained.—*The Lancet.*

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HYSTERO-EPILEPSY AND METALLO-THERAPEUTICS.

In a previous issue, we entered into a full discussion of the clinical history of the peculiar disease known as hystero-epilepsy. In the present article we propose to criticise the genetic relationship which is supposed to exist between this disease and metalloscopy, as well as its treatment by the newly-developed method of metallo-therapeutics.

In 1876, the so-called metalloscopy discovered by Dr. Burq was first brought prominently before the medical profession, although the founder of the new doctrine had been engaged for years in investigations on this topic, without being able to gain a hearing before the bar of professional opinion. But during the last two years, this latter condition of affairs has been reversed, and the subject is now, to say the least, receiving its full share of attention. At a recent metallo-therapeutic and magneto-therapeutic demonstration held by Charcot in his wards at La Salpêtrière, such eminent men as Virchow, Grainger Stewart, Gamgee and Lankester were attentive auditors. The wonderful results obtained irresistibly remind us of numerous vagaries—of Parkin's tractors, of hypnotism, of odic force, and of the host of other delusions of this nature—that have been long since consigned to the limbo of oblivion. But metalloscopy and metallo-therapeutics come to us with the sanction of such authoritative names—Charcot, Luys, Vulpian, Onimus, and many other younger but well-known investigators—that we may not, therefore, dismiss the doctrine involved with a shrug of the shoulders or a skeptical smile. A doctrine which is fathered by such men as we have mentioned, must be soberly and carefully examined, however wild and fanciful it may appear at first sight. The results obtained by M. Dumontpallier—who is the reporter of the Commission appointed by the French Society of Biology to investigate the experiments of M. Burq—are substantially as follows:

It is found that if a plate of a certain metal, which varies in individual cases, be placed upon the affected side of an hystero-epileptic patient who is suffering from achromatopsia, hemianæsthesia and hemianalgesia, in a period varying from a few seconds to half an hour, there will be a return of sensibility, not only as regards general sensation, but also of the special sense. The return of sensibility usually first appears in a small zone around the site of the plaque of metal that has been employed. The muscular power, also, which is generally somewhat diminished in the anæsthetic limbs, becomes restored to its normal extent. Another remarkable fact in connection with this application of the metal is that very frequently the hysterical symptoms are transferred in toto to the hitherto healthy side of the body. This curious feature is known as the "phenomenon of transfer." At first it was supposed that these wonderful effects were due to the development of a current of electricity produced by the contact of the plate of metal with the skin, and M. Regnard has indeed succeeded in proving the existence of such a current by some careful experiments with the galvanometer. It has been also shown that the application of a slight current of electricity will produce analogous effects to those caused by the plaques of metal. But Dr. Burq, in the course of his prolonged investigations, made the remarkable discovery that if the metal, which proves active when applied to the skin, be exhibited internally in the form of a soluble salt, it will exercise the same effect, or, to use Dr. Burq's own language, the "external metallic aptitude" is also the equivalent of the "internal metallic aptitude." The effects of the internal administration of the metal differ from those of the external application in so far that in the former the "phenomenon of transfer" is not produced. Several patients, who had been suffering for years from the severer manifestation of hysteria and hystero-epilepsy, and who had proved intractable to the most varied kinds of treatment, experienced a remarkable improvement in all their symptoms from the internal employment of the soluble salts of various metals, continued steadily for a couple of months. We must distinctly remember, however, that it is acknowledged by the French Commission that the hysterical diathesis was *not cured* in these cases, or in other words, they were liable to relapses. And, as a matter of fact, none of these patients have yet been discharged from La Salpêtrière as entirely recovered.

Results entirely similar to those we have already noted are produced by the use of solenoids, magnets, heat and cold.

In a recent demonstration by Charcot, a solenoid—an insulated wire which connects the two poles of a single element of a galvanic battery—was wound around the finger of a patient who was suffering from

hemianæsthesia and achromatopsia. Almost immediately after the application of the solenoid, the nervous symptoms (hemianæsthesia and achromatopsia) were transferred to the opposite side of the body, while the hitherto affected side returned to its normal condition. This state of affairs persisted as long as the solenoid was kept applied to the finger, but when it was removed, the hysterical phenomena again appeared in their usual site.

Dr. G. Thermes, of Paris, has announced in a very recent number of the *Gazette des Hôpitaux*, as the result of a series of experiments, that the simple application of heat or cold (according to the peculiar sensibility of the patient) will produce analogous effects to those already mentioned.

Physical contact has been a necessary condition to the efficacy of the various agencies which we have hitherto described, but M. Charcot has recently discovered that this is not an indispensable requisite. He states that the same effects will be produced if the two poles of a moderately powerful horse-shoe magnet be placed *at a short distance* from the patient. Charcot succeeded in *almost* curing a case of hysterical contraction of the left arm which had lasted nine months, by daily magnetization of the right arm. Sufficient time has not, however, elapsed to enable us to determine whether these results will prove permanent. It is a significant fact in this connection that Drs. Charcot and Gamgee have obtained entirely negative results when the nerve of the leg of a frog was placed between the poles of an extremely powerful magnet, in order to determine whether any change would be produced in its physiological properties. With such positive testimony as to the existence of the various phenomena to which we have thus briefly called attention, we cannot doubt their actual occurrence. But when we attempt to investigate the connection between the phenomena and the application of metallic plates, solenoids, magnets, etc., we wander into the region of metaphysics and transcendental physiology.

According to Dr. Burq, the effects depicted are due to certain mysterious affinities between our organisms and certain of the metals in our environment. This explanation might, perhaps, be intelligible to an alchemist of the Middle Ages or to some archæologist learned in mystic lore, but to us it is entirely incomprehensible.

M. Vigouroux's explanation is as follows: the peripheral organs of general and special sensation possess a definite electrical equilibrium which is an essential factor of their proper function. The solenoids, etc., produce a tension which modifies this electrical condition and the various nervous phenomena produced are the manifestations of such a modified electrical condition.

But, in attempting to construct a theory on which to explain these effects, we must first assure ourselves that a causal connection really exists between the two series of events in question, viz.: metalloscopy and the nervous symptoms so frequently referred to, and we must, especially, be on our guard against reasoning *post hoc ergo propter hoc*. We must convince ourselves, particularly, that the phenomenon of transfer, etc., do not follow any indifferent cause which can exercise no specific influence. We are, however, unable to do this in the face of the testimony recently adduced by two English observers. One of them, Dr. Inglis, saw the "phenomenon of transfer" follow the application of a mustard plaster, and equally conclusive was the observation of Dr. Bennet, who found it develop after the cutaneous application of plaques of wood. The cogency of these facts as strong evidence against the existence of any specific relation between magnets, solenoids, etc., as a cause, and the phenomenon of transfer as an effect, is palpable to all.

Another consideration of importance is to be found in the fact that by far the vast majority of these cases have transpired in the wards of La Salpêtrière, in an atmosphere, accordingly, which we must regard *a priori* as very prolific in the production of curious hysterical phenomena. From the printed reports of the observations made at this hospital, as well as from the account given by Dr. Gamgee in a recent number of the *British Medical Journal*, it does not appear that due precautions were adopted to guard against voluntary as well as involuntary deception on the part of the patient. In the first place, no mention is made of the patient being blindfolded during the experiments—a precaution which is so essential in the investigation of curious phenomena connected with hystero-epilepsy that it appears almost incredible to us that it was not adopted. In the second place, it appears that a verbal demonstration of the various symptoms was being carried on during the very production of the phenomena. It is well known to all who have had merely a moderate amount of experience in this field of medicine, that calling the attention of the patient to any particular symptom is very prone to call such symptom into existence. Thus we have on several occasions seen severe hysterical convulsions produced by merely telling the patient that a convulsion was about to ensue.

Another strong negative point is furnished by the fact that so many factors have been found efficient, *e.g.*, metals (external and internal), electricity, solenoids, magnets, heat and cold, wood and sinapisms. It appears to us strictly logical to infer from the existence of such a variety of dissimilar so-called causes that neither of them is an efficient factor, but that the real cause must be sought for in the condition of the general nervous system of the patient. The theory offered by M. Vigouroux, to which we have referred in the course of this article, points out the direction in which the explanation must be sought.

While, therefore, freely admitting that the remark-

able phenomena reported by Charcot and his school are actual occurrences, we must be allowed to indulge in considerable skepticism as to the existence of any relationship between these phenomena and the reputed causes thereof. History furnishes us with so many exposés of deception—voluntary and involuntary—in this field of nervous diseases that we think our skepticism is fully warranted from a purely historical point of view. The psychologist, as well as the specialist in nervous diseases, will always feel deeply grateful to the French school for their indefatigable labors in this direction, but we venture the prediction that the hope which was held out to the practical physician that metallo-therapeutics and kindred remedies would prove a reliable treatment of severe forms of hysteria and hystero-epilepsy, will turn out to be fallacious.

EXCLUSIVE PUBLICATION OF SOCIETY PROCEEDINGS.

At a recent meeting of the Philadelphia County Medical Society, it was decided unanimously that no report of the proceedings should be published, except by the *Philadelphia Medical Times*. Consequently it appears that only the subscribers to the journal in question can be benefited by the deliberations of this learned body. Why the Society should see fit to restrict its good offices in such an absolute manner, it is difficult to understand, except perhaps on the score that extra slips of the transactions are distributed to the members gratis. If the surrender value of the proceedings is fully equalled by the compensation given, there is but one idea to be entertained of this arrangement. It is no part of our purpose to object to the publication of the proceedings in the *Philadelphia Medical Times*, but only to the monopoly of them.

The principle is a bad one—no matter from what side we view it. The journal is virtually under a contract to publish anything and everything sent by the Society. While this may be fair to the Society, it is not so to the readers, and will in the long run seriously offset the exclusive privilege of publishing the really valuable material. The members of the Society interfere with their interests in limiting their channels of communication with the profession, if not in positively interfering with the prompt and extensive dissemination of professional intelligence. Viewed from this point, the position taken by the Society is not only absurdly illiberal, impertinently selfish, but positively stupid.

But, granting that all parties directly concerned are satisfied, some reasonable doubts may be entertained regarding the right which any society holding public meetings may have of making such contracts. We hold that so long as any meeting is open to the public, it belongs to the public. While an author owns his manuscript and a society owns its official report, anything of either which is simply read or spoken, belongs to any one who can catch and retain it. This does not take away any credit from an author, speaker, or society, but simply gives all whom it may concern the opportunity of benefiting by suggestions given, and each hearer of becoming a disseminating influence for new ideas. If any hearer chooses to write out a report for a medical journal, and it is published as such, we do not see how any objection could be reasonably taken. The report, when once made, be it long or short, full or in abstract, becomes the property of the reporter, as representing so much actual work on his part. Any society may vote that its official transactions shall be published in any particular journal, but we fail to see how it can prevent any other reports of its proceedings being made in the way any other periodical may see fit. The only way to keep to the letter of the contract is to sit with closed doors and hide the light under a bushel. As soon as the light is uncovered, however, it is free to all, each can appropriate it to his own purpose, all special privileges to the contrary notwithstanding.

DISTINGUISHED VISITORS—MR. CALLENDER AND DR. ANDREW CLARK, OF LONDON.

We announce with pleasure the arrival of two distinguished visitors from London, Dr. Andrew Clark, F.R.C.P., who has been sent by the queen to accompany H. R. H. the Princess Louise and the Marquis of Lorne, and Mr. Callender, the distinguished surgeon of St. Bartholomew's Hospital. Both of these gentlemen are well known to the profession on this side of the Atlantic, and their presence among us as guests cannot fail to call forth our most cordial feelings of welcome. As will be seen, Dr. Clark proposes to utilize his short stay among us by presenting his views regarding the nature and treatment of diseases of the lungs. We have no doubt that his lecture on Tuesday next, at the Bellevue Hospital Medical College, will be interesting, and that the attendance on that occasion will prove to him that the profession in this country appreciate the value of his investigations. Mr. Callender will visit Philadelphia before making any stay in this city. On his return here it is to be hoped that he will likewise favor us with the results of his experience in that branch of our profession in which he has won so much deserved distinction. Both gentlemen come to us with prejudices in favor of the American medical profession, and each will doubtless take advantage of the opportunities for visiting our public institutions and studying our methods of practice. Let us hope that they will carry away with them such impressions as we shall be proud to have them entertain, and that their visits here, like those of Sir Henry Holland, Marshall Hall, Spencer Wells, Erichsen, Lister, Barnes, Adams, Simpson, and Lauder-Brunton, may serve to keep alive that cordiality of professional feeling which has so long existed between this country and Great Britain.

Reviews and Notices of Books.

A CLINICAL EXPOSITION OF THE MEDICAL AND SURGICAL DISEASES OF WOMEN. By ROBERT BARNES, M.D., F.R.C.P. Second edition. 8vo, 784 pp., with 180 illustrations. Philadelphia: H. C. Lea. 1878.

THE medical profession will undoubtedly give this new and revised edition of Barnes's work a hearty welcome. The author has given this edition a "conscientious revision," rearranged the matter, and made considerable additions thereto. A special feature of this work is its excellent and fairly complete exposition of "the anatomy of the pelvic organs." This subject is excellently illustrated by thirty-four drawings from Sappey, Savage, Kobelt, Richard, Raciborski, Breisky, Farre, Hassall, and Tyler Smith, Guyon, John Williams, Kundrat, and by the author. The minuteness, at the same time conciseness of anatomical detail, and the assistance rendered by the woodcuts, must prove of great value to the student. "A line drawn from the upper margin of the symphysis pubis to the lumbo-sacral articulation will strike the upper margin of the fundus of the uterus. Another line drawn from the lower border of the symphysis pubis to the lower margin of the fourth sacral vertebra will touch at its middle the point of the cervix," is Dr. Barnes's description of the normal position of the uterus.

"Conditions Demanding Local Examination" is an article well worth careful perusal. We cannot accept the teaching that we should postpone local examination in cases of dysmenorrhœa "so long as it does not exceed endurable bounds;" it is better to examine *all* cases, unless the cause is *manifestly* hysterical. We further think Dr. Barnes is in error in describing the transparent, viscid, mucous plug, so often found, as "almost always, *in health*, found in the cervix, filling up the canal." It should be described as a supra-secretion, due to congestion or subinvolution, or cervical hypertrophy.

Uterine hemorrhages are admirably discussed. A most important injunction is: "*In all cases of hemorrhage coming from the body of the uterus, obtain and maintain free patency of the cervical canal.*" Too much stress cannot be laid upon this point. Gtt. v.–x. doses of tr. hamamelis (hamamelys here spelled) must be of slight value in a hemorrhage properly called. The reviewer must acknowledge the inestimable value of large doses of ext. ergot (Squibb) used subcutaneously; these failing, the tampon of tannic acid (ʒ ij.), or alum (so highly recommended by Thomas). The "significance of sterility" is summed up in all its bearings (pp. 112–120). "The significance of symptoms connected with the urinary organs and the rectum in relation to uterine and periuterine affections" (20 pages) forms the matter for the very valuable Chapter III. We are surprised, however, to find no mention made of incision of the bladder (artificial vesico-vaginal fistula) for the cure of intractable cases of chronic cystitis. Chapter IV. describes the requisite gynecological instruments and *armamentarium*. All the instruments recommended are excellent, especially Küchenmeister's metrotome-scissors, Neugebauer's speculum, and the author's speculum for the patient's use; all are figured.

The physical "diagnosis of diseases of the pelvic organs" is admirably described, and meets the wants of the student. A full description of the introduction, selection, and uses of tents should have been incorporated in this chapter, instead of merely referring to this subject in describing the author's tent-carrier in the previous chapter, where only fifteen lines are given.

The author gives a very excellent *résumé* of our knowledge of normal menstruation in opening Chapter VI. His views are summed up thus by himself: "Admitting, however, as we must, the occasional operation of disturbing circumstances, the general law is that these phenomena (ovulation and menstruation) are reproduced periodically . . . . ; consequently the ripening of the ova, and most frequently their dehiscence, are revealed outwardly by the *appearance of the catamenia*." Italics are his. Vicarious menstruation receives considerable space. We are especially sorry to know that a man of Dr. Barnes's good sense and judgment recommends the straight-jacket in "extreme cases of erotic mania, and even in cases less severe," thus admitting either an unwillingness or an inability to treat such cases in a humane and rational manner.

"Disordered Menstruation" covers 76 pages, including "the irregularities of the climacteric epoch," and "the relations of menstruation to various diseases," and the subject is, one might almost say, exhaustively treated. We wish the author had been a little more lucid in regard to the amenorrhœa in phthisical subjects, and warned against all efforts at re-establishing the menstrual flow. In neuralgic dysmenorrhœa, we are advised, on p. 219, to give gr. $\frac{1}{4}$ of atropia subcutaneously. This must be a typograpbical error, since such a dose would undoubtedly produce very severe "head" symptoms, and dilatation of the pupils to the production of temporary blindness more or less severe. Hoffman's anodyne is a favorite with the author, but in these cases it must be of doubtful efficacy when uncombined. Pages 261 to 265 lucidly show the influence of menstruation upon the nervous system. The diseases of the ovary are considered in a most admirable manner. It may truly be said that the reader can, in the four chapters (108 pp.) here devoted to the subject, find all he may desire to know concerning diseases of the ovaries and Fallopian tubes, their diagnosis and treatment. Excellent cuts (nine), drawn by the author, of specimens in various London hospitals and museums, serve to illustrate the text. It is impossible to give a condensation of even the author's views on ovariotomy alone, and we must be content to refer our readers to the work itself. We cannot leave this subject without calling attention to the fact that the author gives twenty-four pages alone to the differential diagnosis of ovarian tumors, and the article could not be more perfect. Three diagrams illustrate the text. Ovariotomy is minutely detailed. Thirty pages are devoted to extra-uterine (Dr. Barnes prefers ectopic) gestation. This is a clear gain to the owner of the book, since it is not, strictly speaking, a gynecological subject. This chapter (XIII.) presents an excellent exposition of this subject, and is fully up to date. "General Observations on Uterine Pathology; Effects of Labor and Lactation; Involution in Defect and Excess," form the subject-matter of Chapter XVIII., which should be read by every student and practitioner. Chapter XIX. disposes of uterine fluxions, hyperæmia, congestion, engorgement, and inflammations in a highly satisfactory manner. Although the treatment recommended is, in the main, judicious —especially in discountenancing intra-uterine injections—he lays too little stress upon the value of the hot-water vaginal douche. It is to be regretted the author did not devote more space to ulcerations of the

os and their treatment. Authors, it seems to us, should always caution the physician that the use of pure nitric acid, acid-nitrate of mercury, etc., generally produces subsequent undue contraction, usually stricture, of the uterine canal, especially of the external and internal os.

Chapters XX. and XXI. on "Pelvic Inflammations" and "Perimetric Hæmatocele" respectively, are very full and satisfactory. The author disagrees with Dr. Thomas as to the differential diagnosis of pelvic peritonitis and pelvic cellulitis, except in rare cases, as he considers both inflammations occur simultaneously, without the predominance of one or the other. Simple opium we prefer to opium and *calomel* (preferred by Dr. Barnes) in this disease; furthermore, atropia is a much better remedy for hiccough than the agents mentioned on page 508 (bismuth, hydrocyanic acid, pepsine, creasote, ice, soda-water). One of the best chapters in the book is Chapter XXII. on "Displacements of the Uterus." Copiously illustrated, he must indeed be stupid who cannot thoroughly understand the subject after carefully reading this chapter. The author's elucidation of this subject, including the manner of introducing pessaries (illustrated), is especially valuable to the student. Then comes "Inversion of the Uterus," a chapter of twenty pages, of great interest and practical value.

Tumors and cancer of the uterus occupy 100 pages. We must refrain from any extended review of the author's treatment of the pathology of this subject, and content ourselves with summarizing his views as to treatment.

1. Medicines are almost, if not quite, powerless to promote the absorption, or resorption of tumors of the uterus.

2. The possibility of restraining their growth by the use of ergot requires more conclusive evidence.

3. Galvano-puncture would seem to promise good results in this direction.

4. Enucleation is not an encouraging practice, but may be employed in certain cases.

5. Removal by the écraseur or loop is always to be preferred when possible.

6. Laparotomy is a justifiable operation.

7. "The justification for attempting enucleation, avulsion, or other mode of removing large fibroids will rest upon: 1. Uncontrollable hemorrhages endangering life. 2. Signs of sloughing or decomposition of the tumor, with present or threatening peritonitis or pyæmia. 3. Dangerous pressure upon the bladder and rectum. 4. Such great size as to cause dangerous pressure upon the abdominal and thoracic viscera."

The author lauds the galvano-cautery as the best agent for the amputation of the cervix in cancer.

Diseases of the vagina and vulva, and coccygodynia close the volume proper, although there is a very full "index to authors," the works of the major portion, Dr. Barnes says, he has consulted.

The author does not write in the spirit of a "specialist," but grounds himself on broad views, and elucidates his subjects from the standpoint of a general practitioner. Indeed, he warns against falling "into the deplorable snare of becoming a specialist" (p. 157). He further says, "How absurd it is to map out the body, and assign particular territories to particular classes of practitioners."

One typographical error—there are very few in the book—on page 396 should be corrected; in line four from the bottom, the word "tear" should be *sear*.

We very confidently recommend "Barnes" to the student of medicine as supplying him much which is not to be found in other books, and to the practitioner as being a most practical and sound book of reference, second to none.

VISIONS: A STUDY OF FALSE SIGHT (PSEUDOPIA). By EDWARD H. CLARKE, M.D., pp 315, with a photograph of the author. Boston: Houghton, Osgood & Co. 1878.

STRICKEN with a most painful and fatal disease, we simply wonder that the author could have concentrated his mind upon any subject whatsoever. In spite of the acute physical and mental suffering, Dr. Clarke has written a work wherein true philosophy has been added to a vast knowledge of the latter day physiology of the mind and nervous system. Accepting the theory of cerebral localizations, first promulgated by Bouillaud, supported by Broca, and more recently advanced by the researches of Fritsch and Hitzig, Ferrier, and others, as a fact, the author has built his theory of the mechanism of false sight upon Ferrier's deductions from his experiments upon the gray cortex of the cerebral convolutions, especially of the *angular gyri*. The hypothesis which Dr. Clarke develops is certainly ingenious. It will explain a host of the visions seen both in health (apparent) and disease.

The author cites such cases *in extenso* in his book, and satisfactorily explains them according to the views he promulgates. In spite of these satisfactorily explained cases, there are others which remain just as much in the dark as ever, notably the vision of Lord Brougham, the details of which are herein given. However satisfactory to some Dr. Clarke's explanation of this particular case may be, honesty compels us to admit his failure. Undoubtedly Lord B. was in the habit of enjoying the luxuries of a warm bath hundreds of times previous to the memorable evening without seeing any visions; is it not singular that on the *very day* on which Lord B. took that bath and saw the image of his friend, whom he had neither heard of or from for many years, sitting on the chair whereon Lord B. had deposited his clothes, *that friend had* DIED *in India?* We are no Spiritualist, in fact a confirmed skeptic, but we certainly cannot accept the explanation of this occurrence, which our author holds to us.

In spite of our present knowledge in physics and metaphysics, we must admit, with Hamlet, that "there are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." Whatever the future of cerebral localizations may prove, however much one may be opposed to their acceptance, we can truly say that the work before us will amply repay perusal, not only by the professional, but by the philosophically inclined lay readers. It has a general as well as special interest; and while we cannot go as far as some of its reviewers, in saying "it knocks away one of the strongest pillars of Spiritualism," we feel convinced that a long stride has been taken in this direction, and that the future will supplant Dr. Clarke's theory by facts which will psychologically explain Spiritualism so called. It is only necessary to remind our readers that this volume is from the "Riverside Press," to assure them of the excellence of its mechanical execution.

THE TREATMENT OF DIPHTHERIA. Based upon A NEW ÆTIOLOGY AND PATHOLOGY. By WILLIAM C. BEITER, A.M., M.D. Philadelphia: Lippincott & Co. 1878.

THE author believes the predisposing cause is epidemic, "but the disease is neither infectious nor con-

tagious." The essential pathological condition is *hyperinosis*. Von Niemeyer's "anatomical appearances" are accepted as the perfect description, and the anatomical changes, such as the exudation, enlargement of the tonsils, their necrosis, and all the other nutrient alterations (kidneys, spleen, etc.), are ascribed to fibrinous plugs in the capillaries. Now, the treatment *par excellence* is *large and often-repeated doses of calomel! !*

This is based upon Brown-Séquard's dictum, that "no less than 26,900 mm. of fibrin are daily lost to the blood in its passage through the digestive organs and the liver." Diphtheria interfering with this waste of fibrin, and calomel being the great cholagogue and defibrinator, *ergo*, calomel is *the* curative agent for diphtheria!

Dr. Reiter reports the history of five cases, one of which died. He claims to have treated at least one hundred cases during the epidemic of 1863 and since, but whether all successfully is not stated.

The calomel, he maintains, must be given pure, gr. v.–x. every hour, in water or milk, "until the intestinal discharges resemble the fresh-water polyps in water-troughs, gelatinous, and of a bright dark-green hue."

We live in the days of specifics, to be sure; nearly all the articles of the pharmacopœia have been lauded as "specifics" in diphtheria; bacteria swarm—whether upon the tonsils and pharynx, or upon the eyes of the expert microscopists, we shall not discuss—carbolic acid and other bactericides have been supposed to be *the* remedy for this scourge, and now comes calomel!

For our part, we believe there is no specific for diphtheria, unless a supportive treatment be considered such. Despite Dr. Reiter's laudation, we have not sufficient moral courage to use a remedy which so powerfully devitalizes the system as calomel, when the very essence of the disease is a loss of vitality, analogous to the condition in ileo-typhus and other continued fevers. Not believing in the author's ætiology or pathology, or in the bacteria theory, for that matter, we think, as Prof. H. C. Wood, Jr., wrote the writer, that "Pittsburgh children are hard to kill;" and, further, we prefer to have his diagnosis verified, and to peruse his mortality list in proportion to the number of cases treated, before deciding upon the use of a treatment which, on its face, appears to be calculated to hasten the fatal event.

A MANUAL OF NURSING. Prepared for the Guidance of the Nurses in the Training-School at Charity Hospital, B. I. By EDWARD FRANKEL, M.D., one of the Visiting Surgeons to the Hospital, etc. 16mo, pp. 120. The Department Press. 1878.

DR. FRANKEL deserves the hearty thanks of the many nurses who may have the good fortune to possess this little volume. The author gives most excellent advice to those who are about to engage in the vocation of nursing, keeping the fact prominently in mind that the nurse should always follow the physician's orders implicitly, and never attempt to assume any responsibility outside her own duties in the treatment of the patient.

Herein the reader will find concise rules for the selection and care of the sick-room, for ventilation and disinfection, the management of warmth and light in the sick-room, the arrangement of the bedding of the patient, prevention and care of bed-sores, the selection and care of the patient's clothing, cleanliness, and diet, the administration of internal and external remedies, the use of leeches and cups, surgical dressings, assisting at operations, precautions against the spread of contagious diseases, nursing in pregnancy and child-bed, in insanity, and the duties of nurses in emergencies. Weights and measures, and the definition of medical terms are also appended. The value of this book is very apparent from this index to its contents, and we earnestly recommend that all who are attending upon the sick as a vocation shall purchase it for careful study and future reference.

HOW TO BE PLUMP; OR, TALKS ON PHYSIOLOGICAL FEEDING. By T. C. DUNCAN, M.D. 12mo, cloth. Chicago: Duncan Brothers, Publishers.

Is a volume of sixty pages. Although written by a homœopath, Black ("On Laws of Health"), Harvey ("On Corpulence"), Weir Mitchell, Lehmann, Wagner ("Pathology"), John Hutchinson, Dalton, Letheby, Pavy, and others, form the foundation for the structure of a very concise, interesting and practical answer to the question, "How to be Plump." "Leanness, when it cannot be referred to a satisfactory cause, must be accounted a disease." "Leanness depends upon either predisposing or on exciting causes." Dr. John Hutchinson's table is taken as the standard weight per stature, *i. e.*, five pounds increase per inch over sixty-one inches, the equivalent of the latter figure being one hundred and twenty pounds. There are other valuable tables in the book. Plenty of water (not drunk to excess, however), considerable fatty food, a generous supply of hydrocarbons (starch, sugar, etc.), and an abundance of milk, as well as a generous diet in general, with mental quiet and plenty of sleep, will, according to the author (and authors generally), fill out the lean with a wholesome aldermanic rotundity, oil the wheels of life, and make all run the more smoothly therefor. This book is not only interesting to the medical man, but would be valuable to the laity.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Adjourned Annual Meeting, November 25, 1878.

DR. J. C. PETERS, PRESIDENT, IN THE CHAIR.

UNDER the head of unfinished business, the Society went into committee of the whole, and Dr. ELLSWORTH ELIOT was called to the chair.

Proposed amendments to the By-Laws were then read, and the committee recommended their adoption. The committee arose, the chairman reported the recommendations, and they were adopted by the Society.

REPORT OF THE COMMITTEE ON HYGIENE.

DR. E. G. JANEWAY, chairman of the committee, presented the report, which showed a marked improvement in the health of the city during the past year.

The following points were noted as possessing interest:

With reference to small-pox, it was reported that only *two* deaths had occurred in the city from that disease during the present year, and one of those occurred in a non-resident. At no time since 1822 had there been so few deaths from small-pox as during the present year.

It was reported that 57,000 gratuitous vaccinations had been performed.

Commenting upon the question of vaccination, Dr. Janeway remarked he had, after a careful consideration of the subject, reached the conclusion that there were many points which made the *persuasive* vaccination preferable to the *compulsory*. Compulsory vaccination did not favor re-vaccination, while, with persuasive vaccination, re-vaccination was obtained in a large proportion of cases. It was to the persuasive vaccination that he attributed the marked exemption which the city had at the present time from small-pox.

There had been exhibited no marked fluctuation in the number of cases of this disease during the present year.

The same was said of measles.

The number of deaths from diphtheria and membranous croup during the past nine months was 1,091, which was markedly less than for any year since 1873.

The statistics showed a marked diminution in the number of deaths from typhus and typhoid fevers, there being absolutely a less number of deaths than in the year 1848, notwithstanding the population of the city since that time had been a little more than doubled.

The statistics showed an increase in the number of deaths from malarial fevers as compared with the mortality from these diseases during any year since 1866. Dr. Janeway believed that a part of the increase was due, probably, to the extensive excavation made for the elevated railroads.

The statistics showed that a less number of deaths had occurred from diarrhœal diseases during the present year than during any year since 1866. The number of deaths was 500 less than in the year 1877, and nearly 1,000 less than in the year 1876.

The number of deaths was markedly less than ten years ago, notwithstanding the increase in the population of the city since that date.

Dr. Janeway was inclined to attribute the decrease in the number of deaths, in considerable measure at least, to the general advice given by the special corps of physicians appointed to go in search of cases which were not under medical treatment.

During the last three summers *fifty* physicians had been appointed, who searched for cases not under medical treatment, and gave general advice with reference to the management of infants during the heated season. Much had also been done toward saving the lives of children by the St. John's Guild and other organizations.

Special mention was made of the benefit to public health which had followed the services of the special medical corps, because an application for money with which to continue the same beneficial work had, for certain economical reasons, been declined.

Dr. J. C. Peters, chairman of the committee on the

YELLOW FEVER FUND,

made a report, with the substance of which the readers of the Record are already familiar.

ADDRESS OF THE RETIRING PRESIDENT.

After the transaction of other business,

The President delivered his closing address, in which reference was made somewhat in detail to the work performed by the Society in certain special directions during the past two years. The attention of the Society was called to one subject, which the retiring President regarded as specially important, namely,

REGULATION OF THE PRACTICE OF MIDWIVES.

An account was then given of the method by which certificates were obtained by women who were practising midwifery, and it was believed that they should be made the subjects of legal regulation.

Reference was also made to the action of the Society upon the question of disturbance produced by the elevated railroads, and although ninety-nine-one-hundredths of the inhabitants were benefited by the structures, the President thought we had no more right to turn a deaf ear to those who suffered unnecessarily from such cause than had they suffered from any other noxious influence.

With reference to yellow fever, it was believed that a careful study of the disease would enable us to keep it out of this country, and also that when an epidemic appeared it could be quickly stamped out.

In closing, Dr. Peters welcomed his distinguished successor to the office of President of the Society.

Dr. Ellsworth Eliot offered a resolution of thanks to the officers of the Society for the fidelity with which they had discharged their duties during the past year.

Unanimously adopted.

The Society then adjourned.

Stated Meeting, November 25, 1878.

Dr. Freeman J. Bumstead, President, in the Chair.

PRESIDENT'S ADDRESS.

The President, Dr. Freeman J. Bumstead, called the Society to order, and then proceeded to deliver his inaugural address. After returning thanks for the honor the Society had conferred upon him, the President passed to the consideration of the objects for which the Society was organized. 1. To aid in regulating the practice of physic and surgery; and 2. To contribute to the diffusion of true science, and particularly to the knowledge of the healing art.

Reference was then made to the duties of the respective officers of the Society and its committees.

With reference to hygiene, one of the strongest claims which the public had upon the profession was their services as sanitarians. The cultivation of medical science had been placed second among the objects for which the Society was organized, but it should not be regarded on that account as the least important. Dr. Bumstead believed that no medical society could flourish in these days unless it had for its basis true medical science. It was his desire that the regular meetings for the year should be devoted to the reading of papers and the discussion of subjects which would best contribute to the establishment of such a firm basis. Matters other than strictly scientific could be considered in special meetings.

The President announced the standing committees as follows:

Committee on Hygiene.—Dr. J. C Peters, chairman; Dr. E. G. Janeway, Dr. C. C. Lee, Dr. G. B. Fowler, and Dr. A. B. Judson.

Committee on Ethics.—Dr. Robert A. Barry, chairman; Dr. R. J. O'Sullivan, Dr. F. Zinsser, Dr. S. Caro, and Dr. F. V. White.

Committee on Registration.—Dr. A. E. N. Purdy, chairman; Dr. W. T. White and Dr. H. F. Hanks.

Committee on Prize Essays.—Dr. Fordyce Barker Dr. A. Flint, Sen., and Dr. Ellsworth Elliott.

Auditing Committee.—Dr. Ellsworth Eliot and Dr. Wm. M. Chamberlain.

The paper for the Stated Meeting in December will be read by Dr. C. Heitzmann.

The Society then adjourned.

Correspondence.

THE DETERMINATION OF SEX IN UTERO.

To the Editor of The Medical Record.

Sir:—I have read with interest your editorial in the issue of the 2d inst., relating to the above subject, and followed by a communication from Dr. W. B. Neftel, published in the Medical Record of the 9th, and also one in your last issue, from Dr. Joseph A. Mudd.

I am led in this connection to air a theory of the generation of the sexes, which, if correct, will throw more light upon this mysterious subject of embryology, and will explain the law discovered by M. Thury, Professor in the Academy of Geneva, and referred to in Dr. Mudd's communication.

Observations and inquiries carefully made with a view to determine the correctness of this law have established its truth, in my own mind, beyond a question.

My experience extends over nearly eight years of obstetric practice, and in every case where I can obtain sufficient and accurate data upon which to base my calculations, I am able to predict the sex previous to delivery. The law is substantially this, viz.:

Conception resulting from intercourse *subsequent* to the menstrual flow will result in female offspring; while conception from intercourse in the *latter half* of the menstrual period, or *previous* to the menstrual flow, will result in male offspring. And it appears to me that a rational explanation is offered by the theory which I propose.

The theory is based upon the supposition that there are both male and female sperm-cells, and that the female sperm-cells are vastly in excess of the male; while the male cells are stronger, more active, and more progressive. Such being the case, a coitus taking place just before or at the time of the menstrual flow, and while the ovum is still high up, would be most likely to result in the impregnation of the ovum either at the fimbriated extremity or within the Fallopian tubes by a male cell, whose greater strength and activity would enable it to reach the ovum first.

A coitus taking place later, while the ovum is retained within the uterus, where it would be exposed to the immediate contact of a large number of sperm-cells—the female cells being *largely in excess*—the probability of its being impregnated by a female cell would be enhanced just in proportion to the disparity of numbers. To explain why the sperm-cell producing power of the male should be expended in the production of a large preponderance of female cells is, perhaps, no more difficult than the solution of many of the knotty problems of physiology that are yet unsolved, and in regard to which we are all at liberty to conjecture. Is it not possible that hereditary developmental influence coming direct from the mother and inherent in the male, coupled with a sexual influence, over more or less present, of the female over the male, may be instrumental in bringing about such a result.

In connection with the theory proposed, it would be interesting to know if the sex of abdominal and tubal pregnancies were more frequently male than intra-uterine pregnancies. I regret that I am not able to produce statistical evidence upon this point.

Truly yours,

H. U. Upjohn, M.D.

Kalamazoo, Michigan, Nov. 25th.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 24 to November 30, 1878.

Taylor, B. D., 1st Lieut. and Asst. Surgeon. Upon abandonment of Fort Rice, and until further orders, assigned to duty at Fort A. Lincoln, D. T. S. O. 139, Dept. of Dakota, Nov. 21, 1878.

Medical Items and News.

Contagious Diseases—Weekly Statement.—Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 30, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Nov. 23, 1878.	0	10	103	3	5	68	0	0
Nov. 30, 1878.	0	10	100	3	3	53	0	0

The Suit against the Medical Record for libel, instituted by Dr. W. A. Hammond four years ago, and based upon our criticisms of his article in the *New York Tribune*, on Hydrophobia, has been recently withdrawn by that gentleman.

Coma and Alcohol.—Dr. Macewen, of the Glasgow Infirmary School of Medicine, lays down the rule that an insensible person, who, being left undisturbed for from ten to thirty minutes, has contracted pupils, which dilate on his being shaken, without any return of consciousness, and then contract again, can be laboring under no other state than alcoholic coma.

Dr. Andrew Clark, F.R.C.P., of London, "Physician to the London Hospital for Diseases of the Chest," Lecturer on Clinical Medicine, and Diseases of the Lung in London Hospital, Consulting Physician to the East London Hospital for Children, and the St. Andrew's Hospital; author of the "Anatomy of the Lung," "Evidences of the Arrest of Phthisis," and numerous other papers in connection with this subject, will deliver a lecture on the Diseases of the Lung, illustrated by original drawings, in the lecture-room of the Bellevue Hospital Medical College, on Tuesday, Dec. 10th, at 1.30 P.M. The medical profession and medical students from all colleges are respectfully invited to attend.

Austin Flint, M.D., *Secretary.*

DR. GROSS ON CREMATION.—Professor S. D. Gross, of Jefferson Medical College, has been giving his ideas on the subject of cremation to a reporter of one of the Philadelphia daily papers.

"If people could see the human body after the process of decomposition sets in, which is as soon as the vital spark ceases to exist," said Dr. Gross, "they would not want to be buried; they would be in favor of cremation. If they could go into a dissecting-room and see the horrid sights of the dissecting-table, they would not wish to be buried. Burying the human body, I think, is a horrible thing. If more was known about the human frame while undergoing decomposition, people would turn with horror from the custom of burying their dead. It takes a human body fifty, sixty, eighty years—yes, longer than that—to decay. Think of it! The remains of a friend lying under six feet of ground, or less, for that length of time, going through the slow stages of decay, and other bodies all this time being buried around these remains. Infants grow up and pass into manhood or womanhood; grow old and get near the door of death, and during all that time the body which was buried in their infancy lies a few feet under ground in this sickening state, undergoing the slow process of decay. Think of thousands of such bodies crowded into a few acres of ground, and then reflect that these graves, or many of them, in time fill with water, and that water percolates through the ground and mixes with the springs and wells and rivers from which we drink.

"People turn with dread from the subject of cremation," he said. "Why, if they knew what physicians know, what they have learned in the dissecting-room, they would look upon burning the human body as a beautiful art in comparison with burying it. There is something eminently repulsive to me about the idea of lying a few feet under ground for a century, or perhaps two centuries, going through the process of decomposition. When I die I want my body to be burned.

"Any unprejudiced mind needs but little time to reflect in forming a conclusion as to which is the better method of disposing of the body. Common-sense and reason proclaim in favor of cremation. There is no reason for keeping up the burial custom, but many against it, some of the most practical of which are but too recently developed to need mention. There is nothing repulsive in the idea of cremation. People's prejudice is the only opponent it has. If they could be awakened to a sense of the horror of crowding thousands of bodies under the ground, to pollute in many instances the air we breathe and the water we drink, their prejudice would be overcome.

"Cremation would be taken for what it truly is, a beautiful method of disposing of the body. The friends of the departed can do as they please with the remains. Take the ashes of a wife or daughter and put them in an urn. Place it on your mantelpiece or in as private a place as you please. Strew them on the ground if you like, and let them assist in bringing forth a blade of grass. This would be an advantage over the burial method, where human bodies only cumber the ground."

THE NEW YORK SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The thirty-sixth annual meeting of the Society was held at the New York Academy of Medicine on Wednesday, November 27th, Dr. James L. Banks, President, in the chair. From the printed annual statement of the Treasurer, it appeared that the Society, during the year, had extended aid to 12 widows and 4 children of deceased members. The income of the Society for the year was $7,550.69, including premium on gold, expended to annuitants, $4,302.75, indispensable expenses, printing, safe, etc., $53.95. The *total assets* amount to the sum of $123,172.35. The Society proceeded to its annual election, which resulted as follows: *President*, Dr. Samuel T. Hubbard; *Vice-Presidents*, Drs. Jared Linsly, Isaac E. Taylor, and S. S. Purple; *Treasurer*, Dr. John H. Hinton. *Managers for a Term of Three Years.*—Drs. James L. Banks, Gouverneur M. Smith, Joel Foster, T. C. Finnell, Adoniram B. Judson, John W. Warner, and Thomas F. Cock.

DR. H. J. BIGELOW, of Boston, is on a visit to England and is explaining the uses of his new instruments for rapid lithotrity. He is very justly the recipient of marked attention by the leading surgeons in London.

TRICHINÆ IN FISH.—A sensational story is started in England to the effect that certain pike, taken near Ostend, were found to be full of trichinæ. It is quite probable that these parasites are nothing more than the intestinal worms which invested the Hudson River shad last spring.

PATHOLOGICAL LABORATORY.—Pursuant to a vote of the Faculty of the College of Physicians and Surgeons, at a meeting held on October 31, 1878, I have the honor to forward for publication the following preamble and resolutions:

Whereas, The Association of the Alumni of the College of Physicians and Surgeons has informed this Faculty that it has equipped and endowed a Pathological Laboratory for the use of students of this college, to be known as the Pathological Laboratory of the Alumni Association of the College of Physicians and Surgeons; and,

Whereas, The Alumni Association has indicated Prof. Francis Delafield as its choice for Director of the same; therefore, be it

Resolved, By the Faculty of the College of Physicians and Surgeons, Medical Department of Columbia College, in the City of New York, that this Faculty cannot too heartily express its thanks to the Alumni Association for this important and much-needed addition to the educational resources of the college, nor too warmly express its appreciation of the public spirit of the individual graduates, whose generosity has made the founding of the said laboratory possible.

Resolved, That the choice, indicated by the Alumni Association, of Prof. Francis Delafield for Director of the Laboratory, meets with the cordial approbation of this Faculty.

Resolved, That it is hereby respectfully recommended to the Board of Trustees that the office be created in this college of Director of the Pathological Laboratory of the Alumni Association of the College of Physicians and Surgeons, and that Prof. Francis Delafield be appointed to the said office.

Resolved, That the Secretary of the Faculty is hereby instructed to communicate this preamble and these resolutions to the Board of Trustees; and, in the event of the recommendations therein contained being carried into effect by the Board of Trustees, to read the said preamble and resolutions to the Medical Class, to publish them in two medical journals, and to forward a copy of them to the Secretary of the Association of the Alumni.

Very respectfully yours,
JOHN G. CURTIS, M.D.,
Secretary of the Faculty.

Original Lectures.

VARIETIES OF PULMONARY PHTHISIS.

A Lecture delivered in Bellevue Hospital Medical College, Dec. 10, 1878.

By ANDREW CLARK, F.R.C.P., of London,

PHYSICIAN TO THE LONDON HOSPITAL FOR DISEASES OF THE CHEST, LECTURER ON CLINICAL MEDICINE AND DISEASES OF THE LUNG IN LONDON HOSPITAL, ETC., ETC.

(Phonographically reported for The Medical Record.)

Part I.

Gentlemen:—When I desired to have the privilege of exhibiting to you these drawings of the varieties of phthisis and of setting forth in short and simple outline the views which, after some study of the subject, I had formed concerning them, I did not presume to think that in a city so distinguished as this for its knowledge of the disease, and in the presence of men who have not only largely contributed, and happily, are still contributing, to that distinction, I could communicate much of anything new; still, I desired to show you these drawings that I might have the benefit of your friendly criticism, and learn from that how far they were correct and are confirmed by your experience.

I should have been very glad, and it would have been profitable, as well as interesting, to have begun this discussion with a historical and critical view of the theories which have prevailed in medicine with respect to the nature and varieties of phthisis, and I should have been especially glad to have done this, because it would have given an opportunity for paying a just tribute of sincere admiration to one from whom I learned much, and from whom, I hope, you have learned a great deal more; one amongst you, for whose acute powers of observation, for whose largeness of experience, for whose courage in not saying what he might say, as well as adding to the knowledge of this subject, is deserving of the warmest gratitude of every student of pulmonary pathology. I need not say that I allude to your illustrious countryman, Dr. Austin Flint. But neither the time, nor the circumstances, nor the object of this lecture, will permit me to do this. I must content myself with a simple and short outline of the subject, trying so to connect that outline by ideas that it shall remain alive in your minds, and be capable of being affected by your own experience hereafter.

I will give you the definition of the term phthisis. I understand by the term phthisis the assemblage and progression of symptoms which are due to an ulcerative or suppurative destruction of more or less circumscribed non-malignant deposit in the lung. I do not claim for this definition that it is a perfect one; I am sensible of its defects, but I claim for it that it is a good working definition, and that it includes all the hypotheses; and whatever our views of phthisis may be, it may without prejudice continue to be used. Now you will observe by this definition that I have shut out altogether the disease called acute tuberculosis. I have purposely done so, for in all its methods of advancement and methods of progression, and in the phenomena which attend them in the different states of the body which accompany their development, and in the phenomena in its post-mortem appearances, and in everything which constitutes the clinical history of the disease, this acute tuberculosis is more intimately allied to fever than to phthisis. Now I go further, and say that it has no more intimate and necessary relation to phthisis than pneumonia, and I doubt if it has so much; for it would not be possible for any one with large experience in the disease, to say that in the course of it he had met with more than one or two examples in which the little bodies disseminated through the body which constitute the anatomical peculiarity of phthisis, have ever run together or broken up into cavities, bringing it within the pale and definition of phthisis. I do not say that it never occurs, but it occurs so rarely that it renders it unnecessary to take it into consideration, and I set aside from the question of phthisis altogether the disease called acute tuberculosis. I have one remark more to make bearing upon this point. You know that some years ago Villemin experimented upon rabbits, producing what was then called tuberculosis. At the same time, with the assistance of two of my colleagues, I was also experimenting, and I discovered that not tuberculous matter merely, but almost any matter injected into the neck of the rabbit, would be followed by symptoms which some would call acute tuberculosis; that is to say, the inoculation of pus into the neck of the rabbit was followed in eight or nine days by an eruption of little bodies resembling tubercles scattered throughout the body. You also know that nine-tenths of those who have written upon the subject yet believe, both in England and in this country, that it is acute tuberculosis, and I introduce the subject for the purpose of entering my protest against such views. Now, in all the animals the phenomena observed were as follows: there was, after the inoculation, a little fever; and I defy anybody to cut an animal, however slightly, without producing a little fever. After eight or nine days there was an eruption of what, we will admit for the moment, was tubercles. Following this peculiar eruption, if the rabbits were kept in tolerably favorable circumstances, the entire process of so-called tuberculosis passed away and the health of the animal was entirely restored. Now it seems if we are to call that acute tuberculosis, we are using language wrongly, for there is nothing in this disease, which attacks adults or children, that prevents ill-effects upon the system. It develops the phenomena of fever, which fever progresses more or less regularly, and at the end of three to six weeks the case terminates in death. With this brief reference to acute tuberculosis, I will dismiss this portion of the subject.

When now we examine the lungs of patients dead of phthisis, we may, I think, be justified in classifying the diseased lungs into three distinct groups. I may say, we can do that without great degree of refinement, and we can classify them according to what is apparently the dominant element of destruction in the lung. In one group, obviously, the dominating anatomical element is what is called tubercle. In the second group the dominant destructive agent is some sort of pneumonic exudation. In the third group the dominant element is some kind of fibroid tissue. Wherefore at this stage we are permitted to say there are three varieties of phthisis, speaking after their anatomical elements: one in which the tubercle is the dominating element—tubercular phthisis; one in which some kind of pneumonic exudation is the dominating element—pneumonic phthisis; one in which some kind of fibroid tissue is the dominating element—and we call it fibroid phthisis.

Now, we are at once brought face to face with one of the difficulties surrounding this disease which makes it quite difficult for the student to understand.

When I say that one of these varieties may be called tubercular phthisis, I have said, and I now repeat it, that the dominating destructive agent is tubercle. But tubercles when deposited in the lung irritate it, and as there are very different textures in the lung—simple cellular textures and simple fibrous textures—they excite in these textures secondary changes. In tubercular phthisis these changes are of two kinds, which are always more or less prominent.

When tubercle is deposited in the lung, and gives rise to irritation, it either affects the cell structure of the lung, producing some sort of pneumonia, or it affects the fibrous connective-tissue element of the lung, producing some sort of fibroid complication. And these secondary complications occur in variable degrees, so that, in some cases of tuberculous lung, there is a very large quantity of fibroid material with but little pneumonic material; while in other cases there is a large quantity of pneumonic material with but little fibroid material. You will see, by and by, that this is an important point with regard to the history of phthisis; for according as the secondary complication is pneumonic or fibroid, so is the clinical history of every case of phthisis. Now that being so with regard to tubercle, we have the same effect with regard to pneumonia. Pneumonia occurs alone, but when the pneumonic exudation is not absorbed, when it remains and disintegrates in the lungs, a new source of irritation, so to speak, is established, which begets a secondary irritation, and we may have complicating pneumonic phthisis fibroid tissue, or we may have even the deposit of tubercle. The same thing may be said of fibroid phthisis, although fibroid phthisis which has fibroid tissue for its destructive agent may occur alone, and does so occur more frequently than the other forms, yet it sometimes may have as a secondary complication either the cheesy or tuberculous change.

Now there is a second kind of complication of which I wish to speak before I proceed further. We all understand what is meant by tubercle, but we do not, probably, all understand what is meant by pneumonia. There are at least three anatomical varieties of pneumonia which may be mentioned at this point. There is the common form of croupous pneumonia, which occurs as an acute disease and usually affects the base of the lung, the anatomical element of which is a cell something like the white cell. It runs its course in from seven to nine days, and usually terminates by the melting and absorption of the exudation, and final restoration to health.

But there is a second form, which has received the name of caseous pneumonia, of which we have an example illustrated in this diagram. This caseous pneumonia, as you all know, presents a peculiar appearance to the naked eye. The exudation looks like moist cheese, and the anatomical element is chiefly an epithelial-like cell.

There is a third variety, which is called catarrhal pneumonia, that is, a kind of pneumonia which occurs in connection with bronchitis.

Now the last of these three forms of pneumonia is capable of producing an exudation, which, not being absorbed, undergoes retrogressive changes, and brings the case in the pale of our definition of phthisis. But it will not be necessary to allude to this to-day, and I will omit the question of catarrhal pneumonia altogether, not only because it is debatable ground, but because it would be difficult to make it clear. I will content myself with alluding to common croupous and common cheesy pneumonia as conditions in phthisis.

There is one more difficulty: I think that any one, by looking at these diagrams, will admit that their appearances are sufficiently distinct to warrant dividing them into three groups. There is another difficulty still. It is claimed by pathologists in France, and by many in England, and by many in America, that however unlike all these appearances may be, although tubercle, a little yellowish, grayish body, standing out upon the cut surfaces of the lung, may appear very different from cheesy pneumonia, that histologically and structurally they are homologous, and that caseous pneumonia is nothing but infiltrated tubercle. Nay, some pathologists go a little further, and, straining the use of language, will say that in these fibroid lungs the fibroid masses are still homologous with tubercle; that you do not see the tubercles there, but that the tubercles were once there, and as they were formed they were converted into fibrous tissue, and that from the fresh fibrous tissue so formed at any time may be developed distinct tubercle. This is, I say, straining language further than it is warrantable, but it is still held as an argument by able observers in England.

I will not give way to this argument but I repudiate the histological doctrine that these forms of pathological degeneration in lungs are one, but it will not be necessary to enter into this subject to-day, because I think I have a much higher argument in defence of my views in reference to these changes. That argument is this: I think the truest criterion to the difference in pathological products is not to be found in an anatomical structure. It is to be found in the life history, so to speak. This I take to be the most important point with reference to diagnosis, for forms of anatomical expression are but few, consisting chiefly of cells, fibres, and granules; in fact, we can enumerate the destructive elements of disease upon our fingers, while the dynamic states of which they are an expression may be many. Furthermore, there are forms of anatomical expression which clearly recognize different life states. For instance, one which occurs to me:—When we place under the microscope a section of a tubercle and a section of Peyer's gland from a typhoid-fever patient, I should like to know who has ever been able to distinguish between the two. The morphological changes are the same, but there are important clinical differences in the diseases which have given rise to these morbid changes So, I say, we have for the present a structural argument; but I place the argument for distinction upon a much higher ground, and I repeat that the true criterion of difference between the pathological changes is to be found much more certainly in their life histories than in their final anatomical expressions. Before leaving this question, I will make another observation in regard to structural characters, namely, that the characteristic anatomical element of tubercle is the lymphoid cell; that the distinguishing character of catarrhal pneumonia is the epithelial cell, that the distinguishing character of fibroid degeneration is a fibroid mass with fibro-cellular elements in it. Now, the question arises whether such mere pathological curiosities which can be distinctly recognized in the dead-house can find adequate expression in the wards of the hospital. If that were so, I should be content to leave them where they are, but I think these distinctions are not merely pathological curiosities, for if I follow them into the wards there can be recognized much more distinctly than in the dead-house, these three groups of phthisis which have been anatomically characterized. The better to illustrate what I have said, I will sketch the history of a case from each group.

First, I will give a representative case of tubercular phthisis, that form of phthisis in which the dominant anatomical element is tubercle plus the secondary consequences in some form of pneumonia and some kind of fibroid tissue. We shall suppose the disease occurs in a girl about eighteen years of age. She has been for some time ailing, has been losing in flesh, strength, and color. She has large pearly conjunctivæ, flushing cheek, and early symptoms of exhaustion. When the doctor finds her in this condition he makes a physical examination of the chest, and finds nothing which will account for the phenomena and constitutional disturbance. By and by, she begins to have fever in the evening, and as yet no evidences of lung trouble can be found. Perhaps six months after the beginning of this the physician discovers simply a crepitation at the summit of one lung, and he now knows definitely that the case is one of tubercular phthisis. Then begins cough, expectoration, and irregular fever.

The extension of the disease is steady, but the constitutional symptoms take the lead of local signs. The patient goes on, the disease gradually progressing, and probably within four years, at most, the case comes to an end. Now, before leaving that class of cases, let me make a further observation—that the slowness or rapidity with which the case progresses, depends upon the secondary complication. I think it is almost an axiom that turbercle *per se* does not kill. If by any means we can keep the patient from having a further increase of tubercles, and what is more frequently possible, from further pneumonic or fibroid complications, the patient may live for many years.

It is according to the character of the secondary complications that the future of a case of pulmonary phthisis is determined. If the secondary complication is fibroid, the progress of the case is slow, and the patient may enjoy comparatively good health for a long time. If, on the other hand, the secondary complication is pneumonic, then there are developed in the lungs little pneumonias which produce fever and wasting, and the case is one which always progresses more or less rapidly.

In tubercular phthisis with a secondary pneumonic complication dominating, the prognosis is always bad. In tubercular phthisis with secondary fibroid complication, the prognosis may be very good indeed. It is in such cases that some people think by drinking whiskey that a secondary fibroid complication takes place, and the life of the patient is prolonged beyond the average.

The peculiar clinical feature, however, of tubercular phthisis, is that at first there are but few local signs with profound constitutional disturbance.

Now we come to the clinical character of cases of pneumonic phthisis. The two kinds of pneumonia which we have taken into consideration are the ordinary croupous pneumonia and the cheesy pneumonia. Now I will represent croupous pneumonic phthisis by giving a specimen case. It is typical, and will answer for many cases. Here is the lung of a patient who was well known in the London Hospital; his name was MacIntosh; he came into the hospital with all the usual signs of pneumonia. The pneumonia, however, had some features which were exceptional, and which led me to give the prognosis in the case which I did. He had the usual symptoms of pneumonia, with this qualification: dullness over the seat of the disease was more complete than usual. There was diminished tactile vocal fremitus instead of increased. Instead of bronchial breathing there was feeble breathing, and, in short, there were present symptoms almost like those present with pleuritic effusion. There was no tubular breathing. There was diminished vocal resonance; and the dullness was considerable, but as there was no displacement of organs, no projecting of intercostal spaces, and there were profound constitutional symptoms, I had no difficulty in arriving at the conclusion that the case was one of pneumonia. I then predicted that we were certain to have trouble with this case, for I had observed that when there remained diminished tactile fremitus, and such physical signs as have been enumerated, the lungs were unable to fulfill their function, and so it was with McIntosh. He expressed himself as feeling quite well, but the physical signs remaining were diminished breath sounds and diminished vocal resonance. He got quite well and went out of the hospital, but had this solid mass in the right lung. He was not long out, say about two months, when he returned. I then watched him for twenty-two months. The course of the case was simply that of ordinary pneumonia, in which the pneumonic exudation was unabsorbed, probably from local circumstances, for there was no family history of ill-health, and there were no severe constitutional symptoms. There was probably an increase and a suppurative disintegration of pneumonic exudation; at all events the pneumonic lung broke up. I then predicted another thing, in which I was quite wrong. For, it had been my experience that whenever a pneumonic exudation breaks up, that within a month of that time, evidences of what is called tubercle would appear in the other lung. I have not known an exception to this law, and in Peter McIntosh, when the pneumonic lung began to break up there were evidences of something wrong in the other lung, and I then made the prediction that tubercle was developing there. At the end of twenty-two months he died, and here is an illustration of what we found upon post-mortem examination. There is nothing here, as you see, which can be called tubercle, there is simply lobular pneumonia. Now, this is a rather quick example of what may be called pneumonic phthisis arising from a common inflammation.

The diagnosis of these cases is not very difficult, because we have a slow inflammation followed by trouble at the base of the lung; the trouble there never disappearing, and being followed at last by symptoms of phthisis. And if to this you will add the fact, that the summits of both lungs are early involved, you are probably safe in making the diagnosis of croupous pneumonic phthisis.

Here I am called upon to make another qualification. It is in the early stages of these affections that I believe we can more readily recognize them. In the latter stages it is difficult, and the reason for this is plain. In the early stages of these affections the distinctive anatomical characters can be made out from the history of the case, but in the later stages the whole symptoms are due more to the destruction of lung tissue, than to the nature of the destroying agent. Hence, it is most important that we should not forget that in the later stages it is next to impossible to recognize these distinctive changes. It is in the early stages alone that we can be sure in making such distinctions, and then I think it can be done.

(To be continued.)

SPENCER WELLS.—The *British Medical Journal* thinks Mr. Spencer Wells should be gazetted K.C.B for his eminent services.

LECTURES ON CLUB-FOOT.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK (SPECIAL COURSE).

By JOS. C. HUTCHISON, M.D.,

VISITING SURGEON TO THE BROOKLYN CITY HOSPITAL; SURGEON-IN-CHIEF TO THE BROOKLYN ORTHOPEDIC INFIRMARY; CONSULTING SURGEON TO THE KINGS COUNTY, ST. PETER'S AND ST. JOHN'S HOSPITALS, ETC.

LECTURE III.

Treatment.—In considering this branch of our subject, a question which presents itself at the very threshold is, "At what age shall the treatment be commenced?" I have no hesitation in saying that if the child is in a fair condition of health the treatment should be commenced when it is six or eight weeks old. Nothing is gained by delay, but on the contrary we know very well that the longer the foot is permitted to remain in an abnormal position the greater is the resistance to be overcome, owing to the shortening of the ligaments which is constantly going on, thereby fixing the bones more firmly in their abnormal position. It has been objected to very early treatment: *first*, that the child's skin will not bear the pressure of the mechanical force necessary to keep the foot in position, that ulceration and gangrene are likely to supervene; and *second*, that there is great difficulty in adapting mechanical appliances to an undeveloped and misshapen foot. A considerable experience in the use of plaster-of-Paris splints in the treatment of club-foot has convinced me that such objections are unfounded, and I shall have the opportunity of showing you that club-foot can be treated in the youngest and most delicate children without the slightest discomfort. Is there, on the other hand, any age beyond which we cannot hope for a cure? According to Bouvier, it is rare to obtain a satisfactory result in congenital club-foot after the age of fifteen or twenty years, even with the aid of tenotomy. He says that talipes and equinus are curable at a later period than varus and valgus. Malgaigne thinks that we cannot hope for any improvement in congenital varus after the eighteenth year, and this precept, which is concurred in by most writers, will hold true in the generality of cases.

I do not propose to consider the various plans of treating varus which have been practised from time to time by English, French, German, and American surgeons, for, however interesting and instructive such a discussion might be, it would be impossible to engage in it with the limited time we have at our disposal. The plan which I propose in these lectures is to describe merely the treatment adopted by myself, after an experience somewhat extended, in the Brooklyn Orthopedic Infirmary and the Brooklyn City Hospital, as well as in private practice. This experience comprehends the trial of various plans of treatment which have had the endorsement of high authorities. "The scientific treatment of talipes varus when severe, as of several other deformities of the limbs," Mr. William Adams very properly remarks, "can only be accomplished by a judicious combination of the operative, mechanical, and physiological means, while many of the failures still witnessed in the practice of those who have not devoted much attention to the subject are due to the want of this combination of principles, too frequently considered as antagonistic to each other, but which modern science teaches us are only reliable in so far as their mutual dependence is recognized and applied by the scientific insight of the surgeon." * Mr. Adams has more strongly than any other writer inculcated the importance of the *physiological* treatment, in addition to the operative and mechanical, in the management of varus. The *physiological* treatment consists in passive motions of the tibio-tarsal, transverse tarsal, and other joints of the foot, shampooing the muscles with dry, hot flannels—dry heat having a marked influence in restoring nervous energy—and localized electrization (galvanization and faradization) of the muscles, especially of the weakened peronei muscles. Every experienced orthopedist must recognize the value of the judicious combinations of those methods of treatment in severe cases. You must not suppose that when you have removed the deformity by the division of the contracted muscle, and the use of mechanical appliances, that you have effected a cure. You have only palliated the case, and you may have the mortification of witnessing a relapse, or of seeing that the usefulness of the limb has not been materially increased by the treatment. You have not used all the means at your command. In order to effect a cure you must give tone to the muscles of the limb, promote its nutrition, re-establish its innervation, and loosen up the joints by the use of electricity, local gymnastics, and friction. The physiological after-treatment is equally and often more important than the operative or mechanical. The function of the limb must be restored as well as its form. In a certain number of cases tenotomy is indispensable in the treatment of club-foot, whilst in other cases a cure can be effected by the use of mechanical and physiological means alone. Now let us consider the management of cases of club-foot in which *operative treatment is unnecessary*, or in which a reasonable doubt of its necessity exists. I have already stated that the severity of the case and the consequent prognosis does not depend so much on the degree of distortion as on the resistance offered to the reduction of the deformity by manipulation. In cases apparently severe, we can sometimes easily overcome the distortion by manipulation, while other cases, presenting even a less degree of deformity, are rigid and unyielding. In deciding, therefore, whether an operation be necessary in any given case, we must be guided by the degree of the rigidity rather than the grade of the deformity. If we can, by taking hold of the foot with the hands, bring it quite or nearly into its normal relations with the leg, it is not, as a rule, necessary to practise tenotomy. The operation should, in such cases, supplement the mechanical treatment, if it should be found necessary. I am aware that many orthopedic surgeons are prejudiced against the use of mechanical appliances without tenotomy, claiming that it subjects the child to great torture, causes it to cry and wail during the whole course of the treatment, not infrequently produces fever and convulsions, and renders a suspension of treatment necessary. I have myself witnessed these dire consequences from the use of Scarpa's shoe and its various modifications, which exert pressure upon prominent parts of the foot; but by the use of plaster-of-Paris, applied as I shall now describe, which presses not upon the bony prominences merely, but uniformly upon every square inch of surface to which it is applied, a great deal of mechanical force can be used for a long time without the slightest pain to the child.† For the reasons, therefore, that the application of plaster-of-Paris is painless, what-

* On Club-Foot, p. 22, London, 1876.

† Plaster was first used in the treatment of club-foot by Dieffenbach. See also papers on Treatment of Deformities of Foot with Plaster, by Prof. J. L. Little, MEDICAL RECORD, vol. i., p. 537, and the late Dr. Enos, Trans. Med. Soc. State N. Y., 1863.

ever amount of pressure is applied, and the duration of treatment greatly abbreviated, I cannot too strongly urge this method of treatment at first and until the distortion has been overcome, whether tenotomy has been practised or not.

The mode of application I will now show you. This little patient is the subject of talipes varus of a mild form, which I expect to be able to cure without tenotomy. I take two pieces of coarse canton-flannel long enough to extend from the head of the tibia around the heel to the ball of the great toe, and wide enough to embrace two-thirds or three-fourths of the circumference of the leg. Flannel, with coarse meshes such as I show you, or coarse towelling, should be selected, because they hold a large quantity of the liquid plaster. Fine fresh plaster, such as dentists use, should always be preferred. Unless it is fresh it does not set quickly, and the hands of the surgeon while holding the foot in position will tire before the plaster has hardened, and the foot returns somewhat towards its abnormal position. The plaster is put into a bowl, and warm water is added (stirring constantly) until the mixture is of the consistency of cream. Warm water is used because it hastens the hardening of the plaster. One layer of the cloth is now laid upon the table and its upper surface is covered with a layer of the liquid plaster, spread smoothly with a spatula or table-knife. The second layer of cloth is then immersed in the liquid plaster and applied evenly and smoothly over the first. The under surface of the first layer, you will observe, is not covered with the plaster, and it is the surface which is to be applied next to the skin. I now, with the aid of an assistant, place it around the limb from the head of the tibia to the ball of the great toe, carefully folding in the redundant cloth around the transverse tarsal and tibio-tarsal joints, where greater strength of bandage is required, and then cover the whole with a roller-bandage. I now grasp with one hand the inturned foot in front of the transverse tarsal joint and force it outward, elevating at the same time the external border, while with the other hand the heel is forced downward. By these manipulations I abduct and rotate outward the bones in front of the transverse tarsal joint, and flex the foot at the tibio-tarsal articulation. The foot is firmly held in this position until the plaster hardens, which usually requires about five minutes if the plaster is fresh. When the rigidity of the tissues is considerable, which is not the case in this patient, the foot may be fixed more firmly in the new position by the application of some of the liquid plaster over that portion of the bandage which surrounds the back part of the foot and ankle. The dressing should be removed every four or five days and a new dressing applied, the foot having been first thoroughly washed, rubbed, and manipulated, so as to loosen the transverse tarsal, tibio-tarsal, and calcaneo-astragaloid articulations, and to stimulate the innervation of the muscles. Friction and passive movements, which cause but little pain, materially aid in restoring the freedom of the joints and in expediting the reduction of the deformity, and should never be omitted. At each reapplication of the dressing, the foot may be brought nearer to its normal position—from five to eight dressings usually being sufficient to reduce the deformity completely. When this has been accomplished, the foot may be put into one of Ahl's adaptable club-foot splints, such as I now show you (Fig. 11.) This splint I have found extremely useful at this stage of the treatment. This splint is made of felt stiffened with shellac, and is very pliable when heated. To adapt this splint it is immersed in boiling water until it becomes pliable, and is then applied to the foot and leg, which have been previously covered with a thick stocking; the foot is now forced into position with the hands, in the manner already described after the application of plaster-of-Paris splint, and held until it hardens; it is now covered with a roller-bandage. The splints remain pliable for a few seconds only, and it is well to protect the hands from the heat by cotton gloves which have been wet with cold water. One advantage of this splint is, that it can be readily removed and readjusted by the mother, who should be instructed to shampoo the muscles and manipulate the foot in the manner already described, in order to restore motion to the joints.

It is of the greatest importance that undue pressure shall not be made upon any particular part of the foot, for fear of producing abrasion of the skin or superficial gangrene, which would necessitate a suspension of the treatment. If, therefore, the child, by restlessness or otherwise, shows signs of pain, the splint should be at once removed and a layer of wool-batting placed over the points of greatest pressure and the splint readjusted.

The electric current (Faradic or constant) will materially assist in restoring the functions of the

Fig. 11. Fig. 12.

muscles, which have lost their power, not from absolute paralysis (in the congenital cases), but from disuse. The felt splint may be used until the child is able to walk. It is better, however, as the deformity has been reduced by the above method, to apply Scarpa's shoe, as modified by Tiemann, which I here show you. (Fig. 12.) This not only retains the foot in position, but applies the principle of continued elastic extension, first enunciated by Dr. Henry G. Davis* or by Mr. Heather Bigg.† and subsequently adopted by Mr. Barnwell and Dr. Sayre. This apparatus, with its arrangement of spiral springs, does not in any way interfere with the action of the muscles; indeed, the elastic springs act as substitutes or as assistants to the elongated muscles, which are weakened by disuse, and by aiding in developing this contractile power often prevent and sometimes help

* American Med. Monthly, March, 1857.
† "Orthopraxy," p. 289. 2d edition.

to overcome fatty degeneration. At the same time the contracted muscles, ligaments, and fascia, while they are kept on the stretch, also have the opportunity of contracting and thus acquiring tone, the function of the muscle being in no way interfered with. Sayre's modification of Scarpa's shoe is also an excellent instrument. It differs, you see, from Tiemann's (Fig. 13) in having a ball and socket-joint instead of a lateral

FIG. 13.

hinge under the hollow of the foot, and rubber tubing is substituted for the coiled wire springs: the latter are more durable. It is extremely important that the apparatus be accurately fitted to the limb in all its parts, and that the joints correspond exactly with the axis of rotation of the articulations on which they are to act. When the child is old enough to walk, the shoe should be used during the day and the felt shoe at night. The mother should manipulate the felt, in the manner already described, regularly twice a day when the shoes are changed.

When the foot has acquired its natural position, if the child is old enough, it should be encouraged to stand and walk. The weight of the body becomes a very valuable gymnastic agent, and contributes very materially to the removal of the last traces of the deformity. We should make use of this aid as early as possible. If the tendons are perceptibly contracted after the mechanical and physiological treatment have been used a month, then tenotomy should be practised at once. It may still be possible to make a cure by apparatus alone in such cases, but tenotomy will shorten the treatment and expedite the cure. The treatment of the case after tenotomy will be considered hereafter.

Such, gentlemen, is the plan of treatment which I would advise in cases of club-foot in which operative treatment is unnecessary, or in which a reasonable doubt of its necessity exists. The plaster-of-Paris shoe is incomparably superior to any other in the beginning of the treatment and until the deformity is reduced. It is the most comfortable for the patient, it retains the foot in the exact position in which the surgeon's hands put it, and indeed becomes a substitute for the hands and keeps up a constant and long-continued pressure which would be impossible with the hands alone. "The hand," says Bouvier, "is the ideal of mechanical means for reducing the deformity," and this opinion is endorsed by all practical orthopedists. We will now consider that class of cases *in which tenotomy is indispensable.*

TRANSFUSION OF MILK VERSUS TRANSFUSION OF BLOOD.

CLINICAL LECTURE DELIVERED AT CHARITY HOSPITAL, NOVEMBER 16TH.

BY JOSEPH W. HOWE, M.D.,

CLINICAL PROFESSOR OF SURGERY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF NEW YORK.

LECTURE II.

(Reported for THE MEDICAL RECORD.)

RESULTS OF TRANSFUSION OF BLOOD IN ADVANCED PHTHISIS—TRANSFUSION OF BLOOD IN SYPHILIS—TRANSFUSION OF BLOOD IN PATIENTS HAVING BOTH SYPHILIS AND PHTHISIS—INSTRUMENTS EMPLOYED.

GENTLEMEN:—Last Saturday I showed you the manner in which transfusion of milk was performed. You all witnessed the peculiar and dangerous symptoms which attended the passage of the milk into the circulatory system of the sick woman. It was the general opinion that the transfusion would shorten her life, and that she would survive the operation but for a few hours. We were all mistaken. A short time after being carried to the ward, both pulse and temperature approximated more nearly to a normal standard. At 9 P.M., seven hours after the operation, her pulse was 120, respiratory movements 32, and her temperature 100° F. At 6 A.M. the morning after, the pulse was 110, respirations 24, temperature 99° F. At 6 P.M., the same day, pulse was 120, respirations 32, temperature 101° F. To-day she is sitting up in an arm-chair feeling quite comfortable. She thinks the transfusion helped her, but she is not willing to have it repeated to-day.

The operation for transfusion of blood, which I intend to show you this afternoon, is one of the oldest on record. The records are meagre, and few and far between, but still are sufficient to prove the antiquity of the operation. Passing over the oft-repeated story of the sorceress Medea, who injected vegetable juices mixed with blood into the veins of old men to make them young again, and the well-known case of Pope Innocent the VIII., upon whom the operation was performed with fatal results, we find little interest taken in transfusion until the seventeenth century. Then, through the labors of Lower in London, and Denys in Paris, whose operations were very successful, general interest was excited, and transfusion of blood became a fashionable operation for a few years. In 1825 Dr. James Blundell performed transfusion in a large number of cases with wonderful success, and since then the operation has maintained something of a hold on the medical mind, never dying out completely, but performed at rare intervals with varying results.

In this country the operation has been performed quite frequently during the past ten years by Profs. Austin Flint, Jr., T. G. Thomas, Morton, Brinton, Hunter, Ives, and others. I have used blood in transfusion thirteen times. Only two of my cases were operated on for loss of blood. The only case out of the thirteen that received permanent benefit from the operation was a patient in this hospital, whom I transfused for profuse and long-continued epistaxis. In all the cases but one there was temporary relief. Dr. Thomas G. Morton, of Philadelphia, and others, report a larger percentage of good results because their operations were performed on patients suffering from great loss of blood. It is in such cases, and not in the exhaustion from disease, that transfusion of blood is particularly indicated. Dr. Morton, who has ex-

amined the statistics of the operation and added much to the literature of the subject, says that in one hundred cases of transfusion for post-partum hemorrhage, over fifty-six per cent. recovered, and in forty-one cases of hemorrhage from wounds over fifty-eight per cent. recovered.

On the other side of the Atlantic transfusion of blood has been resorted to for the cure of phthisis. A London surgeon, whose name I have forgotten, reports three cures by the operation. I have also performed the operation on bad cases of phthisis, but without any permanent beneficial effects. One of these patients was a lawyer in active practice in Brooklyn. He was forty years old, and had suffered from phthisis for fifteen years. In 1868 large cavities formed in both lungs, and he was given up by his physicians. He rallied, however, and continued at work until January, 1875, when a severe diarrhœa set in which destroyed all hopes of even a partial recovery. I first saw him on the 11th of February, 1876. He was then sinking rapidly, and had evidently but a few hours to live. The medical gentlemen in consultation, Drs. J. C. Hutchison, Vrooman, Catlin, and Barber, agreed with me that the transfusion would be of little service, but as the patient was extremely anxious to give it a trial the operation was performed. Dr. Vrooman, the family physician, furnished the blood, which was injected by means of the aspirator. The first two ounces injected made the pulse imperceptible at the wrist, and the respiratory movements gasping and hurried. The eyeballs twitched from side to side, and he became partially unconscious. Pressure over the epigastric region was resorted to in order to push up the diaphragm and force air out of the lungs. This measure, which is always useful in restoring the respiratory movements and the action of the heart, produced the desired result, and he soon breathed as well as before the operation commenced. Two ounces more were then thrown in with similar unpleasant results; the insensibility, however, was more marked. The operation was then suspended. For more than an hour he remained in a semi-unconscious condition; then rallied, and the rest of the day he seemed much improved. On the 12th he expressed a desire for food, but kept little of it on his stomach. On the 13th he grew weaker, and on the 14th he died. His medical attendants thought his life had been prolonged thirty-six hours by the transfusion.

The second case was transfused in this amphitheatre. The patient was a laboring man, aged thirty-five. He had had phthisis two years. Both lungs contained large cavities. He suffered greatly from dyspnœa. His temperature was 103° F.; pulse, 120; respirations, 30 per minute. Not being able to sit up, he was carried into the amphitheatre on his bed. I injected the same amount of blood as in the previous case and in the same manner. As the operation proceeded, he exclaimed: "Oh, that feels so good; it is so nice and warm. I can feel it all through me." He had no unfavorable symptoms during the operation. His pulse dropped to 112, and his respiratory movements became much easier. On the evening of the same day his temperature ran up to 104° F., and the pulse increased to 140 per minute. Three days after the transfusion the temperature fell to 101° F., and the pulse to 105. For two weeks he seemed much improved in every way. At the end of that period, however, the disease took a fresh start, and he died four weeks from the day of operation. I presume another transfusion would have prolonged his life still further, but he was not desirous of having it repeated.

No. 3 was transfused the same day at the same clinic. The patient was forty-two years old; suffered from catarrhal phthisis for fifteen months; cavities existed at the apices of the lungs, but he was not so low as the patient that preceded him. In this case I used Colin's instrument for transfusion. The blood was first defibrinated with glass rods, strained through linen, and injected. When two ounces had entered the circulation, the patient's face became livid, his respiratory movements gasping, and he said he felt as if about to suffocate. He seemed to suffer so much that I at once discontinued the injection. The only improvement that appeared in this case was a diminution in the cough. A few weeks afterwards the patient left the hospital and I lost sight of him.

Now these three cases give you a very good idea of the benefit which phthisical patients derive from transfusion, and the peculiar symptoms developed during the operation you may possibly witness again to-day.

With regard to the instruments necessary for the operation you can choose from a large number, and you can use either defibrinated or undefibrinated blood. If the latter is employed, it should always be mixed with a solution of carbonate of ammonia to prevent coagulation. If you are in the country, and cannot get a proper apparatus, an ordinary hard-rubber syringe will answer the purpose. The vein can be opened and the nozzle of the syringe inserted without a canula; or you can make a canula with a small goose-quill, and insert the tapering end into the vein. Be careful always to force some blood through the nozzle before inserting it, to drive out the air. When you use the syringe, the blood should be carefully and thoroughly defibrinated. If you have no syringe, a glass funnel with a rubber tube and small canula will answer. The blood may be allowed to flow from the donor's arm directly into the funnel, but it is better to defibrinate it first. When the air is driven from the tube it can be attached to the canula, and the blood will flow slowly into the vein. Professor Thomas employs the glass funnel and rubber tube for the transfusion of milk.

The principal instruments for transfusion are Dieulafoy's aspirator with my transfusion needles and tubes, Colin's instrument, and Aveling's. With the first I have operated twelve times; in one case only have I used Colin's. The transfusing tubes of the aspirator are, as you see, about ten inches in length. They have a calibre of two and a half millimetres. To the extremity of the efferent tube there is attached a hollow needle with a curved, sharp extremity. This small calibre is necessary to prevent the vein from becoming emptied too soon. The aspirator is placed in the basin of water at 107° F. and the cylinders exhausted by turning the handle from left to right. When this is done I insert the needle into a bottle containing a solution of carbonate of ammonia (ten grains to the ounce), and turn the stop-cock of the aspirator and allow an ounce of the liquid to run into the aspirator. The stop-cock is then closed and the instrument is ready for use. Now you take a bandage and place it around the arm of the donor above the elbow, and tie it sufficiently tight to obstruct the circulation through the veins, but not through the arteries. If the arterial supply be cut off the veins will soon be emptied of their blood. You see that the bandage has produced considerable distention in all the veins of the donor's forearm. This distention will be increased as soon as he clasps his hand tightly on the stick he holds. When the veins are fully distended, I take the needle attached to the efferent tube and insert it obliquely from above downwards into the median

basilic vein. I turn the stop-cock, and the blood rushes from the vein through the tube into the cylinder of the aspirator, passing on its way through the solution of ammonia, which it already contains. To obviate all danger of the vein becoming emptied before a sufficient quantity of blood has been obtained, I occasionally compress, as you see, the rubber tube between my thumb and forefinger. The cylinder of the aspirator has now six ounces of liquid in its interior—five ounces of blood thoroughly mixed with one ounce of the solution of ammonia. The stop-cock is closed, the needle taken from the vein of the donor, and the aspirator can remain in the warm water until the patient's arm is prepared for the injection.

This patient is twenty-six years old. He has had several hemorrhages from the lungs, and coughs a good deal. He has a cavity in one lung, and signs of consolidation in the other. In January, 1878, he contracted syphilis, and since then has passed through all the secondary manifestations of the disease, and is now showing symptoms of tertiary. He has now syphilitic ulcerations of the pharynx, and necrosis of the nasal process of the superior maxillary bone. There are also several large syphilitic ulcers on both legs, and the integument in other parts of the body show large cicatrices, resulting from old syphilitic ulcers. Pigmentation of the skin may also be seen in the vicinity of these sores. The patient is, as you see, extremely anæmic and cachectic. His pulse is weak, intermits a little, and is now 115 per minute. His temperature is 101. Transfusion of blood ought to benefit him. Now I push up the integument over the median cephalic vein and incise it. You can see the blue vein through the incision. I next make an opening in the vein in the same direction as the cut in the integument, and introduce the canula of the aspirator, closed by the stylet. Now I turn the stop-cock of the efferent tube, and by reversing the handle of the aspirator force some blood through the tube, at the same time driving out the air. I then take the stylet out of the canula; blood escapes from the end of the tube; so there is no air either in the canula or in the tube of the aspirator. The tube and the canula are now attached, and Dr. Rice will hold them in position. By turning the handle of the aspirator from right to left, the blood is forced into the vein.

Injection commenced, Professor Otis noting the changes in the pulse.

Prof. Otis: The pulse beats 120 per minute; has fair volume.

Prof. Howe: One ounce of blood has already passed into the vein. How do you feel?

Patient: I feel no trouble anywhere.

Prof. Howe: Another ounce has passed in. How do you feel now?

Patient: About the same.

Prof. Otis: The pulse is increasing in volume.

Prof. Howe: Have you any unpleasant sensation about the chest?

Patient: There is no bad sensation about the chest, but I feel kind of dizzy.

Prof. Otis: The pulse is a trifle irregular.

Injection proceeded.

Prof. Howe: Do you think you could walk straight?

Patient: I don't think I could.

Prof. Howe: Is there any pain in your chest?

Patient: There is a slight pain about the heart. The dizziness is increasing in my head.

Prof. Otis: The pulse is a little more rapid.

Prof. Howe: Do you see single or double?

Patient: I see you single.

Prof. Howe: Do you feel any pain now?

Patient: A sort of pain in my head.

Prof. Otis: The pulse is 140, and not quite so strong.

Prof. Howe: Do you feel any difficulty in breathing?

The patient takes two full inspirations without inconvenience.

Prof. Howe: How does your head feel?

Patient: It feels better than it did.

Prof. Otis: The pulse has diminished in frequency.

Prof. Howe (still slowly continuing the injection): How do you feel?

Patient: I feel comfortable.

Prof. Otis: The pulse is 130.

Prof. Howe: He has now received nearly three and a half ounces of blood. How do you feel?

Patient: I feel bad; I feel a thumping in my head.

He takes a full breath without difficulty. Injection continued.

Prof. Otis: The pulse is increasing in rapidity.

Prof. Howe: How do you feel?

Patient: The dizziness is growing worse. My head feels bad, and there is a slight pain about my heart.

The patient's face was covered with red circumscribed blotches when the operation ceased.

Prof. Otis: The pulse is increasing in volume.

Prof. Howe: How does your head feel now?

Patient: It feels pretty well.

Prof. Howe: The patient will now be carried to the ward, and the house-surgeon, Dr. Rice, will carefully note the changes which will take place from the operation.

The next patient who is anxious to try transfusion is forty-one years old. He has had phthisis for one year. He is constantly troubled with cough, expectorates blood occasionally, and has been running down rapidly ever since the beginning of the attack. He is now, as you see, very much emaciated. His lips are pale and bloodless. There are cavities in both lungs. The pulse is fuller and stronger than in the previous case, and is only 88 to the minute. Respiratory movements are 32; temperature, 101° F. I will use Colin's instrument in this case. The inventor of the instrument intended that it should be used for the introduction of undefibrinated blood, and it is so employed on the continent. I would not feel justified in using it in this way. There is always some danger of clots forming when the blood is exposed to atmospheric influences, and one small clot might destroy the patient's life.

The most important point about Colin's transfuser is, that it is impossible for air to get into the tube of exit during the injection. If, then, the blood be defibrinated thoroughly and every particle of fibrin removed, and the liquid injected with this instrument, the operation of transfusion is completely divested of two of its principal dangers—in fact, the only dangers attending it—viz., the admission of air and the formation of clots. The unfavorable symptoms which attended my first use of this instrument may have been due in part to incomplete defibrination. The blood was whipped once and strained once only. This time it shall be more thoroughly done.

Here are three "finger-bowls," each one immersed in a basin of warm water at 107° F. The blood from the donor's arm is received into the first one. Covering the top of the second bowl is a piece of clean, fine linen; on the top of the third is a piece of white

satin, which has been previously washed in boiling water. I take a glass rod and "whip" the blood in the first bowl for three or four minutes, then strain it through the linen into the second bowl. A large clot of fibrin is left on the surface of the linen. Now I use the glass rod a second time, whipping the strained blood again for a couple of minutes. Then I strain the blood again through the satin covering into the third bowl. In this latter I have previously placed an ounce of water, containing in solution ten grains of carbonate of ammonia. The blood is then thoroughly defibrinated, and is also mixed with ammonia, which adds to the stimulating effect of the injection.

The median basilic vein in the left arm of the patient is opened in the same manner as in the previous case, and the canula, with a trocar in its interior, inserted. Colin's instrument, which has been for some time in a basin of warm water, is now filled with the defibrinated blood; a small portion is forced out through the tube to expel the air. The trocar is drawn from the canula in the arm, and the smaller canula connected with the rubber tube of the transfuser is inserted into it. Everything is now ready for the injection.

Before the injection of blood was commenced the pulse, as counted by Prof. Otis, was 88.

The injection was commenced.

Prof. Howe: One cylinder full. Do you feel any trouble in the chest?

Patient: No trouble whatever.

Prof. Otis: The pulse remains the same.

Prof. Howe: How do you feel?

Patient: No trouble anywhere, except in the arm.

Prof. Howe: Three cylinderfuls have been thrown into the vein, and I have refilled the cylinder the fourth time. How do you feel now?

Patient: No trouble except when Dr. Rice pinches my arm.

Prof. Otis: The pulse remains as it was at the commencement.

Prof. Howe: The patient has now received four syringefuls, and the instrument is refilled. How do you feel now?

Patient: I feel no trouble anywhere, either in the head or chest.

Prof. Otis: The pulse is 84, and slightly diminished in volume.

Prof. Howe: Another syringeful of blood has been introduced, and the patient says he has no discomfort.

Prof. Otis: The pulse is 86.

Prof. Howe: Another cylinderful has been introduced. Over three ounces have been injected altogether. The patient says he does not feel any pain in the head or chest, or trouble anywhere.

An additional syringeful has now been introduced, and Prof. Otis says the pulse is 78 and fuller. The patient says he feels about the same as at the commencement of the operation. Four ounces of blood have been injected without the occurrence of any bad symptom whatever.

A Sad Scene.—The daughter of Dr. Delcan, of Paris, died in that city recently, of phthisis. The father, who had watched over her sick-bed with untiring devotion, was inconsolable, and refused to quit the chamber of death. His friends were finally about to tear him away by force, when he begged to be allowed a last embrace. He threw himself upon the body, kissed the dead lips passionately, and then died without a cry. The two funerals took place together.

Reports of Hospitals.

BELLEVUE HOSPITAL.

CLINICAL NOTE—MERCIER'S OPERATION FOR VALVULE AT THE NECK OF THE BLADDER.

At a clinic held in Bellevue Hospital October 4, 1878, a man, æt. 70 years, presented himself with obstruction to urination arising from a valvule at the urethro-vesical orifice. From such obstruction he had suffered for a number of years. Mercier's operation for the first time in this country was performed by Dr. J. W. S. Gouley, and the obstruction completely removed.

Remarks by Dr. Gouley:—These prostatic valvules were never understood until they were described by Mercier in 1836; his first book, however, was published in 1841. We had been told by Sir Everard Home that the obstruction to urination was due to development of the central portion of the prostate, and he thought he recognized what has been called the third lobe of the prostate. But there is no such thing as a third lobe of the prostate gland. Instead of that, there is a peculiar development of the central portion of the vesical extremity of the isthmus which takes various forms, but most frequently that of a valvule, which varies considerably in thickness in different cases.

The most common form is that exemplified by the web between the thumb and the index finger. Mercier has recognized another form of valvule occurring in young men, due perhaps to some urethral difficulty, or to stone in the bladder, or to cystitis, and to that he has given the name muscular valvule, because it consists only of muscular fibres, whereas the prostatic valvule is made up of glandular tissue as well as muscular fibres.

This man had a prostatic valvule, and I performed what is known as Mercier's last operation, which consists in clamping, crushing, and incising the tissue with the same instrument. His first operation consisted simply in making an incision through the valvule. Guthrie has described the condition as a bar at the neck of the bladder, and recommended that an incision should be made, but never performed the operation. Mercier was the first to perform it, but considerable hemorrhage followed the simple incision, and he has devised an instrument by means of which the clamping, crushing, and cutting operation can be combined, thereby making it practically a bloodless procedure.

In this case, about one drachm of blood was lost, and for forty-eight hours the urine was slightly blood-stained. Ten grains of quinine were given a few hours after the operation was performed, the temperature has not at any time reached 100° F., the patient has not had a chill, and the case has progressed without a single unfavorable symptom. Soon after the operation the patient urinated without the use of an instrument. But I prefer that he should not do so, for the reason that he has not, for years, passed his water without the aid of a catheter. There is atony of the bladder remaining, which will be treated for two or three months with the hope that he will then be able to pass his water without the introduction of an instrument. If, however, he is not able to pass urine without artificial aid, the final result of the operation will be to greatly facilitate catheterism.

Up to the year 1856 Mercier had incised the valvule upwards of three hundred times, and with satisfac-

tory results. I have seen a patient upon whom he operated twenty years ago, and he was able to sound himself with perfect comfort. The atony of the bladder in this case will be treated by the use of electricity. The faradic current will be employed, one electrode being placed over the sacrum and the other over the hypogastrium.

HYPERTROPHY OF THE MUSCLES OF THE URETERS—A NEW FACT IN PATHOLOGY.

In connection with this case I wish to direct your attention to another important fact, an observation of which I have not seen recorded. It is that in at least a large proportion of cases of valvule at the urethro-vesical orifice there is a second obstruction or bar, caused by hypertrophy of the muscles of the ureters, which divides the *bas fond* into two nearly equal portions. I have in my possession at least a dozen specimens illustrating this point. The significance of this is, that the stagnant urine may be drawn from either of these halves without completely emptying the other. I have repeatedly made the observation upon the living subject, first emptying the posterior half without emptying the anterior; then withdrawing the catheter slightly, from one to two, or even three ounces of urine have been drawn from the anterior half of the *bas fond*. In some cases I have drawn the urine from the posterior half of the *bas fond* after emptying the anterior. What is the practical deduction from the observation? It is simply that we should divide or excise the portion of the bar in the median line so that the posterior half of the *bas fond* would be emptied in the act of urination in the event of a successful incision or excision of the valvule to the anterior half.

Progress of Medical Science.

A NEW VIBRIO GIVING RISE TO A DISEASE RESEMBLING MALIGNANT PUSTULE.—M. Bouley recently presented to the *Académie des Sciences* a paper by M. Toussaint, in which he described a new vibrio, found in cases of a disease resembling malignant pustule. A magnifying power of 500 to 800 diameters revealed, in all the fluids of the body, an immense number of very minute vibrios, spherical, or slightly oval in shape, refracting light but slightly, which rendered them difficult to distinguish in the colored serum of the blood. They occurred singly or in pairs, three never being united in a chain. Their size varied but little; $\frac{1}{10000}$ of a millimetre in thickness, by $\frac{1}{10000}$ to $\frac{1}{5000}$ millimetre in length. They exist in great numbers in the blood (five to ten for a red globule), but in immense quantities in the lymphatic glands. All the humors of the body are inoculable, and the disease is not only communicable by direct inoculation, but also by the digestive tract, and also, perhaps, by the respiratory organs. This microcosm has been cultivated by Pasteur's method, and under the microscope in Ranvier's chamber with gas and heat. It multiplies by division; in two hours and a half one has produced twenty-two. The symptoms of this disease led M. Toussaint to consider it the same as described by MM. Leplat and Jaillard as a carbuncle without bacteria, and by M. Davaine under the name of *Maladie de la vache.*—*La France Médicale*, July 17, 1878.

VENOUS PULSATION.—Dr. Lauder-Brunton has recently called attention to a variety of jugular pulsation which he has observed in anæmic females. The phenomenon is only seen on the left side, and in some cases only with expiration or upon violent exertion; it is due to the pressure of the aorta upon the left vena innominata, together with a dilated condition of the peripheral veins, which permits a rapid filling of the jugular. Attention was also called to the observations of Sir Joseph Fayrer and Dr. Brunton, showing that the pulmonary vein and the vena cava in rabbits might be seen to pulsate rhythmically for a considerable time after the auricles and ventricles had become perfectly still; this, which is not a simulated but a real pulsation, has been omitted from modern text-books, although it is to be found in the older writers. The property of contractility possessed by the veins is but little regarded, and yet it is one of great importance in reference to the maintenance of the circulation in health and disease. It is obvious that if the venous radicles contract, they may oppose an obstacle to the flow of blood in the capillaries, and, by thus increasing the pressure within them, may cause more fluid to exude from them into the tissues; while, on the other hand, a rhythmical contraction may forward the onward progress of the blood, and may prevent some of the injurious effects usually noticed in tricuspid regurgitation. The action of drugs upon the veins has hitherto received but little attention, but it is probable that before very long some definite knowledge may be obtained upon the subject which will assist in the treatment of those diseases in which venous engorgement plays a prominent part.—*The Lancet*, October 26, 1878.

THE OIL OF AMBER IN ANGINOSE AFFECTIONS.—Dr. A. R. Fink, of Philadelphia, recommends very highly the oil of amber for the relief of the neuralgic element of anginose affections. In support of this he cites several cases treated by this drug with marked success. It was only used in conjunction with other treatment, but the pain ceased so invariably on the use of the amber, and, in several cases, reappeared so quickly on its disuse, that, in Dr. Fink's opinion, there could be no question as to the causal relation of the administration of the amber to the relief of the pain. It is the presence of neuralgic pains, and not the organic or functional character of the heart affection, that indicates the use of this agent. Hysterical angina frequently receives the happiest relief from the addition of from eight to ten drops of the oil to an anti-hysterical dose, repeated every twenty minutes.—*Medical Times*, October 26, 1878.

SUBCUTANEOUS DIVISION OF THE NECK OF THE THIGH-BONE.—Dr. J. C. Hutchison, of Brooklyn, reports a case in which he has performed Adams's operation for the relief of bony anchylosis of the hip. After the operation the patient was put to bed with extension, and then after two weeks was allowed to go about on a wheeled crutch, the object being to produce motion at the point of section, and thus prevent anchylosis. When discharged, three months after the operation, he walked comfortably with a cane. In the erect position he carried his foot forward eighteen inches, backward twenty-six inches, inward across the well foot twelve inches, outward twenty-six inches. The limb operated upon is two inches shorter than its fellow, though it seems longer on account of the obliquity of the pelvis; a false joint clearly exists at the point of division. He sits upright with perfect comfort. At last accounts the patient was improving steadily in walking.—*Proceedings of the Medical Society of the County of Kings*, November, 1878.

FILARIA IN THE EYE.—Dr. Chas. S. Turnbull reports a case of filaria occurring in the eye of a horse. The worm was several inches in length, of a white color, and could be distinctly seen without the aid of any artificial means, wriggling about in the anterior chamber. The eye seemed very much irritated, as the horse continually endeavored to rub it, and the stimulus of light caused profuse lachrymation, and, what is characteristic in such cases, *at times only* was the cornea hazy, and the aqueous humor cloudy. The horse appeared perfectly healthy, and was in excellent condition. This makes the third case which has occurred in this country. The first was reported to the Philosophical Society by Judge Francis Hopkinson, in 1783; the second, never reported, occurred in the practice of T. N. Corbyn, V. S., in 1833. The affection is very common in India; Mr. Twining, of Poonah, for sixteen years averaged twenty cases annually. The worm, he says, is a species of filaria or thread worm, called *filaria equi*. According to Sir Charles Percival: "The method of treatment is by puncturing the cornea at its upper and inner margin, and allowing the parasite to escape with the aqueous humor. This spot is selected for the operation because the cornea is here least dense, and because the aqueous humor, which gradually reforms, will be least likely again to escape while the wound is healing. These worms find their way into the animal's body along with the water he drinks, either as fully developed parasites or as ova. Both the parasites and the eggs are found in the stagnant waters of India." In no case of operation for the removal of filaria has the function of the eye been more than temporarily disturbed. The parasite has also been observed in the human eye, as described by Nordmann, Cobbold, Guyot, and others, but they are of rare occurrence, and there are no instances on record of recent date.—*Medical and Surgical Reporter*, October 26, 1878.

EXCISION OF SPLEEN.—According to a communication to the *Boston Medical and Surgical Journal*, the first operation in America for removal of the human spleen was performed by Dr. Oscar C. Dewolf, late of Northampton, now Health Commissioner of the city of Chicago. The patient did well for many hours, and then suddenly died.

REFLEX SYMPTOMS OF HIP DISEASE.—In a paper read before the Massachusetts Medical Society, Dr. Bradford, of Boston, pointed out the reflex origin of the muscular contraction, muscular irritation, diminution in electro muscular contractility, and atrophy observed in hip disease, and, in fact, in all joint diseases. According to most writers, the first of these symptoms is invariably present from the inception of the disease, but Dr. Bradford claims that in one case, out of fifty that he examined, it was only present as a secondary symptom. The diminution of electro-muscular contractility has been observed for some time in joint affections, and, as pointed out by M. Lefort, it precedes the muscular atrophy. These symptoms have been explained in various ways, but Dr. Bradford deems it most rational to consider them all reflex.—*Medical communications of the Mass. Med. Society.*

OPERATION FOR HARE-LIP.—Dr. Christ. Lund gives a new operative procedure for forcing back the intermaxillary bone which frequently projects so prominently in double hare-lip. Most of the unsuccessful results of the operations hitherto performed have been due to the fact that the intermaxillary bone was not forced far enough back before proceeding to the operation on the lip.

He has entirely abandoned the old method of the the entire removal of the intermaxillary bone, which causes the loss of both front teeth, and makes the lower jaw project beyond the upper. Other more recent methods for preserving the bone also have their defects.

Dr. Lund's method is as follows: The septum is divided in an oblique direction from before backward, from one side to the other, and from below upward. In doing this, the knife passes through one fissure and crosses the septum under an acute angle, so that the point of the knife becomes free in the other fissure further back in the gum, and then cuts through the bone. The cut surfaces are thus quite large, and the ends of the bone are made to be alongside of each other, like two pointed wedges. Then, on pressing the intermaxillary bone backward, the cut surfaces will remain, for the most part, or indeed completely, in contact with each other. It should be remembered that the elongation of the intermaxillary bone is in reality more apparent than actual, for it is only the direction which is abnormal, because the angle which this bone forms with the vomer is more obtuse and approaches more to a straight line than normal. There is, therefore, more a turning of the intermaxillary bone on its oblique axis, downward and backward, rather than forcing it backward in its totality. The cut surfaces, therefore, are only turned toward each other, and the fact that they are brought in contact with each other is of importance, not only for their union, but also for the prevention of the so-much-dreaded hemorrhage. In order to hold the portion of bone which is pressed backward in place, a narrow bandage is placed under the nose and fastened behind the neck and to a night-cap, which is also secured by a bandage passing over the vertex.—*Norsk Mag. for Laegevidenskaben*, No. 8, 1878. C.

PILOCARPINE IN ECLAMPSIA.—Dr. Stroynowski reports the case of a primipara, who was admitted into the hospital in Lemberg with a history of five violent eclamptic attacks during the preceding night. She was totally unconscious, restless, and had general tremor. The head presented at the superior strait, and the membranes had ruptured, but the os was not as large as a silver quarter. The urine was loaded with albumen. During the succeeding 3½ hours she had three violent convulsions, after one of which artificial respiration had to be resorted to. At 11 A.M., as a last resort, a Pravaz syringeful of a two per cent. solution of pilocarpine was injected subcutaneously. Two minutes afterwards salivation and profuse perspiration set in, and the patient became quieter and slept for two hours. At 2 P.M. regular pains set in; at 4 P.M. the injection of pilocarpine was repeated; and at 6 P.M., as the os was fully dilated and the head had made no progress during the preceding two hours, the child was extracted with the forceps. No convulsion occurred after the first injection. After delivery the patient slept for fourteen hours and then awoke with full consciousness. The subsequent course of the case was normal, though the urine continued to contain some albumen.—*Centralblatt für Chir.*, Sept. 28th.

CONSUMPTION OF QUININE IN THE RUSSIAN ARMY.—The Russian military hospitals consumed during the year 1877, 13,200 lbs. of the sulphate, and 6,600 lbs. of the hydrochlorate of quinine. Excessive as this quantity seems, the consumption during the present year will be still larger.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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THE PREVENTION OF YELLOW FEVER.

Considering what was expected of the recent meeting of the American Public Health Association at Richmond Va., there is a general feeling of disappointment that so little was accomplished. It was believed that inasmuch as the main topic of discussion was to be the prevention of yellow fever, some very valuable data would be presented and some very important conclusions arrived at. Far from this possibility, however, the time of the session was occupied in a tedious detail of cases, giving no points upon which a discussion could hang, and in fact affording no opportunity, except for a very few, of making any remarks whatever. The Yellow-Fever Commission, which reported on the occasion, came to the association with a mass of indigested facts, the only value of which was centred in a reiteration of principles as regards infection which no one questions. The novel point which was brought out in the shape of a recommendation, was that referring to absolute non-intercourse with dangerous ports as the only means of preventing the appearance and spread of fever in the United States. As this proposition was of the few which invited hearty applause on the part of the association, it is quite easy to form a general estimate of the value of opinions expressed by this body regarding the topic under discussion. The absurdity of the recommendation shows itself upon its face. The measure is radical, it is true, but there is another way of curing squint short of decapitation. We admit that this is no argument against the efficiency of the method of cure; but, in view of milder and equally promising procedures, the question of expediency presents itself.

This statement does not by any means imply a non-belief in quarantine, but simply in such a method of its administration. Indeed, quarantine lies at the foundation of all preventive measures relating to the appearance of yellow fever in any community. It has been proven by the recent experiences, particularly of this port, that absolute protection can be guaranteed to the people, and yet there be no embargo upon commerce. And this is the kind of quarantine that is wanted at New Orleans, or at every other equally exposed port.

Perhaps our present purpose of proving the efficiency of the quarantine regulations of which we speak cannot be better served than by referring to the method adopted by Health Officer Vanderpoel for the past seven years, and its results.

In order to give strength to the argument for this system of quarantine, we may state the fact that more cases of yellow fever came to this port between June and October than all the other ports in the United States. During this period there is a daily average arrival of one or two infected vessels, and yet, at no time, for a number of years, has yellow fever made its appearance in this city. Besides this, thirty or more cases of the fever are treated every summer in the Quarantine Hospital. These statements must go side by side with the one, that New York, during its summer season, is exposed as much as New Orleans during its corresponding period. But we will now pass from the consideration of general facts to that of the details belonging to them.

When a vessel arrives from an infected port, or with sickness on board, she is boarded in the Lower Bay by the Health Officer. The hatches are then opened and the vessel is thoroughly aired, after which a preliminary fumigation is given, the basis of which is chlorine. The bilge is then pumped out by the crew, and every article of clothing used about the ship is thoroughly washed and hung up. Every part of the vessel is thoroughly scoured, when another fumigation of chlorine is given, the hatches then closed, and the vessel sent to the Upper Bay to discharge her cargo. If there has been no sickness on board for six days, the passengers, after supplying themselves with clean clothes, are allowed to go ashore.

As soon as the cargo is discharged the real process of purification begins. The lower hold is then thoroughly washed by force-pumps and every part scoured. The hatches are then left off for some hours, when the vessel is again fumigated, after which she is sent to the city.

It will be seen that the principles upon which this system of quarantine are founded are—first, the mode of propagation of the fever; and, secondly, the time of its incubation. Concerning the first point, there is no doubt that the disease is communicated by fomites. Hence the immediate carriers of the infection are destroyed. This principle is not only carried out with the passengers in health, but with such as are sick with the fever and have to be sent to the Quarantine Hospital. Each patient, before he enters the hospital proper, is supplied with a new outfit of clothes, and his own garments are placed aside for disinfection. As a result of such precaution, there has been no in-

stance of the transmission of the fever from the patient to his attendants, although the latter never had the fever previously to entering the service. But the precautions do not stop here. The attendants on Hospital Island, as well as the stevedores, are continually in quarantine—none of them being allowed to visit the city without special permission from the Health Officer, and never within six days from exposure to infection. To the time of incubation a great deal of importance is necessarily attached, as upon its proper understanding depends much of the success of our commerce with the southern ports. It will be seen—allowing five days' passage from Havana for steamers and ten or twelve days for sailing vessels, and also giving six days as the longest incubation of the disease—that unless there is sickness on the passage the vessel is not detained any longer than is necessary to cleanse and fumigate her, which does not occupy usually more than forty-eight hours.

As these statements are founded on fact, and as nothing can be said against the success of a system which can maintain an efficient quarantine, and do so without detriment to commerce, we wish to offset our results here against the action of the Health Association to which we have already referred. Indeed we believe that the experience of the Health Officer of this port should be taken as a guide for the action of others in similar positions; and his views, so successfully carried out, should form the basis of a system which should extend over the whole country.

So much, then, for seaport quarantine. If we could be equally positive regarding measures which might be adopted for inland quarantine, a very important problem would be solved. The difficulty seems to be in isolating towns and communities, without serious injury to commerce, and to necessary intercourse. But such obstacles to the success of any general system of protection of inland towns are not insurmountable. A step in the right direction, which has often been urged in these columns, is the formation of a National Health Bureau, having jurisdiction over large districts of country, and clothed with extraordinary powers during epidemics. Each town along the Mississippi could have protected itself by refusing a wharfage to infected vessels, or each railroad-station could have forbidden the landing of infected persons; but, as shown by the uninterrupted passage of the steamer Porter up the river, scattering disease in her wake, there is wanted a power behind that of individual municipalities—and that is, to prevent the spread of the disease from the start, to quarantine the first cases, and to assume official control of all the highways of travel.

While upon the general subject of the prevention of yellow fever, we take occasion to refer to a communication addressed by Dr. S. O. Vanderpoel to the President of the United States, and published in another column. The suggestions therein contained deserve thoughtful consideration. The idea is to stamp out the disease at its point of endémicité, and, as a means to such an end, solicit the aid of Spain in the appointment of a committee of conference. It cannot be doubted that Spain will be ready to act in the matter, if our government shall see fit to take the initiative, and, judging from the present indications, the latter condition will probably soon be fulfilled.

ADULTERATIONS IN SUGAR AGAIN.

THE agitation in regard to the adulteration of sugar continues to be quite active. Lately it has been taking the form more of efforts on the part of the refiners to refute the charges against themselves. Very plausible assertions are made to the effect that the hue and cry about adulterations is a job put up by the Cuban planters to make the present tariff, which favors the refiners, unpopular. The tariff now varies with the grade of the sugar, and allows of the importation and refinement of the low grades at a profit. It is proposed to substitute for this a single uniform tariff for all grades, a change that would greatly harm the refining industries. To help such measure the refiners and importers are to be made unpopular in every way.

Then, further, when the present tariff was adopted, a number of old firms were not able to keep up their business under its workings, and eventually failed. They are now eager to encourage any effort likely to secure a return to the old basis. Probably these parties are quite as active as the Cuban planters in the present agitation.

Undoubtedly, however, the most active agents in the matter have been the jobbers and smaller dealers who have found their business injured by bad lots of sugar. The extent and danger of the adulteration may have been exaggerated; but the fact of its occurrence is undeniable. Glucose can be made at an expense of about four cents a pound. If mixed with other sugars, it causes in a few weeks a change of appearance, which is easily observed. When barrel after barrel of sugar thus changes and deteriorates, there can be but one explanation of the cause.

The glucose is made from corn-starch by means of sulphuric acid. It retains a little of this acid, amounting sometimes to two or three drachms to the gallon of syrup. Such a mixture used constantly, and in any considerable quantity, might easily be injurious. Practically, however, the adulteration with glucose is of very much more injury to the dealer than the consumer, and bears rather upon the public palate than upon its health.

The use of mineral salts, however, in refining, is a question that well deserves an investigation, even if it result in favor of the refiner. Each American citizen averages forty pounds of sugar a year. He should know what he is getting, and should have the privi-

lege of taking his poisons separately. The agitation of the matter has already had the result of improving the quality of refined sugars, and may be of further benefit in securing through some special investigation a more definite knowledge of the dangers lurking in adulterations.

SANITARY MATTERS AND THE GENERAL GOVERNMENT.

In noting the signs of the times from a sanitary point of view, the outlook is quite promising. To begin at the beginning, the President in his annual Message has seen fit to call the attention of Congress to the necessity for legislation in sanitary matters, and especially to the creation of a National Health Bureau. This is the first time that this has been done, and it is consequently entitled to special mention in the history of sanitary affairs in general. It is true that the recent pestilence has invited governmental attention to the matter, but that any decided stand should be taken by the President is of itself a matter of great congratulation. The profession is ready to endorse all that is said on this matter, and the views are in strict accordance with what has long since been advocated by the RECORD, and with what we believe to be the advanced professional sentiment of the day. The chief Executive of the nation speaks well and truly when he says:

"The fearful spread of this pestilence has awakened a very general public sentiment in favor of national sanitary administration, which shall not only control quarantine, but have the sanitary supervision of internal commerce in times of epidemics, and hold an advisory relation to the State and municipal health authorities, with power to deal with whatever endangers the public health, and which the municipal and State authorities are unable to regulate. The national quarantine act approved April 29, 1878, which was passed too late in the last session of Congress to provide the means for carrying it into practical operation during the past season, is a step in the direction here indicated. In view of the necessity for the most effective measures, by quarantine and otherwise, for the protection of our seaports, and the country generally, from this and other epidemics, it is recommended that Congress give to the whole subject early and careful consideration."

The Senate and the House have taken up the subject with a promptness and earnestness which augur well for the future. Both have brought up the subject, and the probability is that there will be a joint committee with full power to act in the premises. The Senate committee has already appointed sub-committees each for the exercise of the following respective functions: First, on the constitutional power of the government in public health matters; second, to prepare a circular letter of inquiry to be addressed to boards of health and physicians throughout the country, and to prepare a plan of investigation; and thirdly, on the selection of experts to be appointed by the committee. It is quite probable that the circular letter will be confined to questions affecting quarantine external and internal, and the legislation required to make it effective.

It would appear from the present complexion of affairs that the Senate is not yet satisfied regarding the investigations into the causes and methods of prevention of yellow fever, and that a commission of experts is to be appointed for the purpose of furnishing extra information. It is quite necessary, however, that the appointment of members of such a commission should be made with the greatest care, and with special reference to their peculiar fitness for the work. As the work of the commission must be carried on from a thoroughly impartial standpoint, the man with a theory or a hobby should be shunned, and the opinion of the profession should be taken as the best guide for the selections. We say this much in regard to this particular matter, for the reason that it seems to be necessary, in the face of the pernicious influences which are already at work in Washington to secure appointments. The President is so thoroughly interested in the work that it would be eminently just and proper to entrust him with the nominations. If this were done, the appointment, being the first of its kind that has ever occurred, would have sufficient honor attached to it to secure the best talent in the medical profession.

THE TIMES AND MEDICAL REFORM.

In a recent issue of the *New York Times* appears a very sensible article referring to necessary reforms in medical education. It is so seldom that such papers give an intelligent view of the situation that we take pleasure in calling attention to the fact. The writer, after pointing out the present defects of college training, very properly urges the necessity of preliminary examinations, graded courses, and independent examinations. The arguments and conclusions, which are not, however, new to the profession, are directed towards the prospective management of the Johns Hopkins Hospital, and are well put. While we are willing to endorse everything the writer may have said regarding the necessities for reform and the means to be taken towards that end, we hope his statement, that the majority of the professors of medical schools hold their positions for purposes of medical advertising, is not true. But it is to be expected under the circumstances that we take the bitter with the sweet.

ESMARCH'S TREATMENT OF CANCER.—Fowler's solution, one drop three times a day for three days, then increase the dose by one drop every three days till intolerance of the remedy follows. Apply the following locally: acid arsenious and morphia muriate, each 0.250 gmm.; calomel, 2.00 gmm.; powered gum-arabic, 12.00 gmm.; mix. At first sprinkle only a little upon the ulcer, gradually increasing the quantity to a teaspoonful. This overcomes the odor, causes a hard eschar to form, and healthy granulation takes place.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Nov. 13, 1878.

DR. JOHN C. PETERS, PRESIDENT, IN THE CHAIR.

REPORT OF COMMITTEE ON MICROSCOPY.

DR. CARPENTER, on behalf of the Committee on Microscopy, submitted a report of the examinations of the tumor of choroid plexus presented by Dr. Liautard, of the stomach exhibited by Dr. Blumenthal, and portions of a lung shown by Dr. Lewis Smith.

The report was as follows:

The tumor, which, removed from the choroid plexus in a horse, and presented by Dr. Liautard at a Stated Meeting, held Sept. 24, 1878, was found to consist almost exclusively of fibrous tissue, in which were a number of bodies that exhibited the physical properties of calcareous matter. By testing with iodine it was determined that these bodies were not corpora amylacea. They were readily dissolved by nitric and muriatic acids, and therefore were regarded as brain sand, frequently found in connection with tumors of the choroid plexus.

The tumor belongs to the variety known as psammoma.

The specimen of induration of the pyloric extremity of the stomach, presented by Dr. Blumenthal at the same meeting, was found to consist almost exclusively of fibrous tissue. It was therefore simple fibrous degeneration of the walls of the stomach, a not very uncommon disease.

The lungs, presented by Dr. J. Lewis Smith at the same meeting, contained the lesions of broncho-pneumonia.

WESLEY M. CARPENTER,
T. E. SATTERTHWAITE.

PERMANENT CURE OF URETHRAL STRICTURE.

DR. F. N. OTIS presented a specimen of stricture of the urethra sent to him by Dr. Stuart Eldridge, of Yokohama, Japan. The following was a history of the case:

Patient admitted to Yokohama General Hospital December, 1874, with urethral stricture and urinary fistulæ, with history of a severe gonorrhœa nine years before, and repeated subsequent attacks. In 1870, four years previous, had been operated on by perineal urethrotomy, external; after treatment neglected, and recontraction resulting; finally an abscess of the perineum, leaving two perineal fistulæ.

In May, 1875, urine passed in very fine, small stream, size of a knitting-needle—interrupted—most of urine passing through the fistulæ. Whole urethra extremely knotted and indurated, the thickening and hardening being most extensive on the proximal half of the penile portion.

Meatus 15. Stricture was found along the whole anterior urethra nodulated and irregular, and narrowing at about 4 inches to 4½ mm., where a hard and insensitive stricture of this size extended for nearly an inch. He was operated on by divulsion with Holt's instrument, guarded by a Maisonneuve conductor, until firmly arrested at the bulbo-membranous junction. The instrument was then expanded to the utmost. On withdrawal, the conductor was found to have curled up on the bulbous urethra. Examination then detected another stricture, about 5½ inches from meatus, of same calibre as the anterior, 4½ mm. The Holt was then passed into the bladder, and all strictures raised to 25 mm. After a week only No. 16 steel sound would pass. Patient was furnished a bougie No. 10, and discharged from hospital.

Sept. 6, 1875, patient was readmitted; strictures recontracted, fistulæ open, and albumen and casts in the urine; also suffering from cirrhosis and tertiary s. rheumatism. Retention occurred; catheterism failing, the bladder was aspirated above pubis. A few days later a small flexible catheter was passed. Anterior stricture was found recontracted to 7½, while the one at the bulb would only admit a fine filiform instrument. Holt's dilator was again used, and the urethra carried to 27 mm. The anterior part of the bulb, apparently the only healthy portion, was then measured with Otis's urethra meter, and found to be 29. Otis's urethrotome was then introduced and expanded up to 29 mm., and all strictures incised on the floor of the urethra. No. 30 solid steel sound then passed easily. Urethral flow and partial suppression of urine followed. A week after No. 30 solid sound was easily passed, and afterward, at intervals of a week, for five weeks. No subsequent instrumentation for fear of suppression, except by the patient, who passed a No. 7 English (16 French) flexible bougie for his own amusement, but without any necessity. From the time of last operation until death, June, 1878, patient was without the slightest urinary trouble. Death resulted from a syphilitic ulceration of the larynx. Post-mortem examination showed easy passage through the entire urethra of a solid sound of 25 mm., and complete absence of any rigidity of the urethral walls or abnormal narrowing at any point. On the right side of the roof of the canal appeared, about 2 cm. from meatus, a smooth elastic, perhaps cicatricial, surface, 8 mm. in length by 4 mm. in breadth; at 3 inches in the median line of the roof a small bridle of soft elastic tissue, covering a false passage, 2 mm. in length. About 6½ cm. posterior to this is a small irregular, but soft, distensible cicatrix, 5 mm. in length by two in breadth, while extending backward from a point opposite is a fine linear cicatrix, 1½ cm. in length.

At the bulbo-membranous junction there is an oval depression, covered with a smooth, elastic, soft membrane, supposed to have been the location of the mouth of the sinus which previously existed, the more so, as a probe entered here about 2 mm. There is also in the membranous portion a false passage of 5 mm. in length. All the points presumably occupied by cicatricial tissue were only distinguishable by their superior smoothness and the apparent absence of glandular stricture when examined by a low power.

The case, taken in all its bearings, seemed, according to Dr. Otis, to go far toward proving the permanent curability of urethral stricture even under the most unfavorable circumstances.

GUNSHOT WOUND OF THE EYE — REMOVAL OF THE ORGAN.

DR. JOSEPH W. HOWE exhibited an extirpated eye, containing in its substance a target-dart.

Wm. Vanhousen, æt. 35, proprietor of a shooting-gallery, was shot in the right eye with an iron dart, on Sunday morning, October 27th. The gun was accidentally fired at a distance of three feet from the patient's head. The dart entered the eye at the outer edge of the cornea, and lodged in the centre of the organ. I saw the patient two hours after the accident. He was then suffering from an unusual amount of shock. The extremities were cold and clammy, and the pulse thready and intermittent. There was a

lacerated wound of outer edge of the cornea, about a quarter of an inch in length, through which the foreign body could be felt with a probe. On account of the patient's condition no attempt was made to remove. Five hours subsequently, when reaction had set in, I introduced a narrow drawing forceps, seized the flattened end of the dart, and endeavored to extract it; but the end spread out, caught in the tissues anterior to it. Consequently it could not be drawn out without cutting or lacerating the tissues. As the eye was completely destroyed, I advised its extirpation. On the third day after the accident the patient consented to the operation. It was performed in the usual manner, by cutting through the conjunctiva near the edge of the cornea, drawing the tendons forward with a strabismus hook, cutting them as well as the optic nerve close to the ball. The dart was found to occupy the centre of the ball, its point touching the retina behind on the median line, just as shown in the specimen. The principal points of interest in this case are, first, the occurrence of a great amount of shock from a comparatively small injury—I have never seen it before; and, secondly, the fact that the dart did not pierce the retina on the side opposite to its entrance. It shows that the tissues of the ball have an immense resisting power, which I was not previously aware of.

DR. NOYES remarked that it was very uncommon for foreign bodies, discharged against the eye, to go entirely through the organ.

PISTOL SHOT THROUGH RIGHT VENTRICLE, SEPTUM, AND AORTA—BALL LYING IN LEFT VENTRICLE—APPARENT RECOVERY AT END OF FOURTEEN DAYS—SUDDEN DEATH ON FIFTY-FIFTH DAY.

DR. V. P. GIBNEY presented this very interesting specimen, on behalf of Dr. F. M. Holly, of Greenwich, Conn. The following notes accompanied the specimen:

"A. J., æt. 18 years, farm-hand, was on the 7th day of July, 1878, accidentally shot by a companion with a small Smith & Wesson revolver, calibre $\frac{22}{100}$ inches. When seen by his attending physician, Dr. Mead, about an hour after the accident, he was in a state of partial collapse, the result of shock. He had no remembrance of the shooting, or of having fallen into the brook near which he was sitting at the time. He rallied rapidly without cough or expectoration, or any unfavorable symptoms other than slight dyspnœa, accompanied with pleuritic stitch on both sides for a few days. In less than a fortnight was again at work apparently well.

"He continued in good health, performing the ordinary labor of a farm-hand without inconvenience, until the morning of August 30th, when, after a full breakfast, he went into the field, and was found about twenty minutes afterward dead behind the plough. *Autopsy* twenty-four hours after death: usual post-mortem signs present. A small cicatrix near left nipple one and three-quarter inches above, and toward median line. On opening thorax, the left pleura and the pericardium were found distended with serum and coagula. A small cicatrix could be seen on the anterior border of the upper lobe of left lung in a line with the external cicatrix, and under this was found an opening of one-quarter inch diameter in the pericardium. The lung was adherent, by firm bands of organized lymph in the immediate neighborhood of the cicatrix, to the costal pleura and pericardium. Opposed to the opening in the latter, in the upper anterior margin of right ventricle, was found a small aneurismal sac of the capacity of not more than one drachm, the walls of which were very attenuated. This was ruptured, and a probe passed through the opening entered the ventricular cavity. The effusion into the chest was accounted for by this opening in the pericardium. A careful search failed to discover the ball."

When I received the specimen, I opened the left ventricle, and found a small ball lying behind one of the pillars of the columnar corné a little above, and to the left of the apex of the cavity. A delicate membrane covered the ball, and I left it just as it now can be seen in the specimen. On a more careful examination, an opening was traced through the upper portion of the septum, through the semilunar valve, lying against the septum, through the aorta itself to the left auricle. All these openings were found on a line with the opening into the right ventricle. The conclusion, then, seems to be irresistible, that the ball must have encountered a well-filled left auricle, been spent, and easily arrested, and have dropped down through the auriculo-ventricular opening, and have lodged about its present site.

The sac on outer side of heart seems to be the parietal layer of the pericardium, and must have been formed by the blood forced out at the impulses of the heart. If this can then be properly called an aneurism, it is a dissecting aneurism. The wound through the right ventricle must have been valvular, and the pericardium here quickly healing prevented the escape of blood. This finally rupturing from over-distention, in all probability caused death.

It has come now to be considered no extraordinary thing for a man to carry about in his heart a pistol-ball, or even a musket-ball. Dr. Purple has gathered some valuable statistics on this subject. The specimen presented by Dr. Hamilton to this Society is, I believe, the most remarkable one on record, so far as time goes. This case is familiar to all as the one where the man lived twenty years after the accident. Dr. Hamilton referred to some others at the time of presenting the specimen, one of which was the case reported by Dr. Hopkins, of Ohio, where the patient survived fifteen days with a pistol-ball in the left ventricle. This case, with the discussion, can be found in the MEDICAL RECORD, Vol. II., p. 18. I have consulted the notes of many cases, and I might say, in passing, that Dr. Purple has given an admirable bibliography in his article published in the New York *Medical Journal* for May, 1855.

In the "Surgical History of the War of the Rebellion" is a paper on this subject, with foot-note, giving references to the cases collected by Dr. George Fischer, and published in the *Archiv für klinische Chirurgie*, 1868—those of M. Jamain in an inaugural thesis, and those of Olivier (l'Angia), etc.

In St. Thomas' Hospital Reports, 1870, Dr. James F. West has a valuable paper on "Wounds of the Heart." The members of the Society will recall the Poole case and many others; but what seems the most remarkable circumstance in connection with the case whose history I now present, is the fact of the patient *living fifty-five days* with wound directly through the aorta at its beginning. In the discussion which followed the presentation of Dr. Hamilton's specimen, Dr. Post is reported as having said that "it is a well-established fact that wounds of the large vessels near the heart were much more promptly fatal than similar wounds of the walls of the heart itself." (RECORD, Vol. II., p. 19.)

Now, this case should have been promptly fatal, according to the facts thus established, and yet it

seems to have been possible for the patient to have lived indefinitely with this hole directly through the wall of the aorta.

(*To be continued.*)

THE PHILADELPHIA PATHOLOGICAL SOCIETY.

An Abstract of its November Meeting.

(Reported for The Medical Record.)

The Society met on Thursday evening, November 14th, at 8 P.M.; H. Lenox Hodge, M.D., President, in the chair.

ABDOMINAL TUMOR.

Dr. L. A. Kelley presented a tumor removed after death from the abdomen of an infant, thirteen months old. The abdomen was first noticed to be enlarging when the baby was nine months old. The tumor, after its removal, weighed more than the body of the infant. The specimen was presented to the Society on account of the rarity of carcinomatous disease in children.

TUMOR OF THE BRAIN—CEREBRAL THERMOMETRY, AND THE LOCALIZATION OF CEREBRAL FUNCTIONS.

Dr. Charles K. Mills presented the following history and remarks: R., aged 36, was admitted to the Philadelphia Hospital on the 16th of September, 1878. The patient was a painter by trade. Up to within two years before his death, which occurred on October 16, 1878, he had been intemperate. Six years ago he had had a chancre, but it was not followed by any secondary symptoms. Fifteen months ago he had, upon one occasion, drunk very deeply, and fallen heavily on the pavement. This "outing" was followed by severe vomiting and protracted and harassing headache. His health, from this time, began to fail. The headache became persistent. Indefinite mental disturbances began to show themselves, with loss of power in the limbs. The vision became more and more affected. The pain in the head was always worse at night. There was marked choking of the discs and mental hebitude, with hallucinations, but no delirium. The patient began to lose both mental control and moral sense. There were involuntary discharges of fæces and urine. Motion was partially paralyzed, and sensibility dulled, and occasionally there were spasmodic contractions. Later in the course of the disease vomiting disappeared as a symptom. None of the muscles supplied by the cranial nerves were paralyzed. There was no vertigo and no convulsions.

As the man became more and more confined to his bed, bed-sores appeared in the sacral region. The patient was not emaciated in appearance, and the muscles were not wasted. A peculiar symptom of the case was that the man always held his head in one position, *i. e.*, looking upwards and backwards. The eyes protruded, and the pupils were dilated. Three weeks before death a severe conjunctivitis supervened.

So much for the objective symptoms. It was difficult to determine exactly the man's psychical state. For a long time before death there was great mental slowness. The "delirium of grandeur," so called, was never present. His general condition seemed to be one of depression. He apparently had great difficulty in directing the movements of the body. He would not give any answer whatsoever to our questions. We at first thought that this was due to deafness; but found at last that an answer could be called forth if the impression made were great enough.

He was not aphasic. What he said was clear and distinct. There was no mistake in articulation or pronunciation. But he could not retain hold of the same idea for any length of time, and suddenly stopped speaking because he had lost the thread of his discourse. There were, every now and then, volcanic outbursts of speech. Sometimes what he said during these paroxysms of language was quite well connected and sensible. None of the special faculties were paralyzed, except smell, which was slightly defective. There were no wastings, and no vaso-motor disturbances in the upper extremities. The left arm and hand were somewhat weaker than the right. He frequently carried his hands to his forehead, showing that they were not paralyzed, but their movements were awkward.

The legs were extended and relaxed, or drawn up and flexed. If left entirely alone, they would always become in time relaxed. All of his movements seemed to be largely automatic.

Hunger and thirst were prominent symptoms. He drank and eat enormously. He died, as above stated, on October 16th. For twenty-eight days previous to his death, his morning and evening temperatures were carefully noted. On the first fifteen mornings the temperature was *below* the normal standard of health. In twenty-six evening records the temperature was higher than in the morning. On the ten days previous to his death, the morning and evening temperatures were both *above* the normal standard of health.

During the seven days previous to his death the cerebral temperature was taken in six places. In the course of these observations, which were made with Dr. Mills' modification of E. C. Seguin's surface thermometer, he was able to verify the statements of Paul Broca and Landon Carter Gray, who read a very interesting paper on Cerebral Thermometry at the last meeting of the American Neurological Association. The average temperature of the left side of the head was found to be *higher* than that of the right side. The stations on the head, at which the observations were taken, were, viz.: (1), middle frontal, in the middle of the forehead; (2), middle occipital, in the middle of the occiput; (3), right, and (4) left frontal, just over the outer corners of the orbits; and (5) right, and (6) left parietal stations. The parietal stations were just above the ears. The observations were made between three and five o'clock in the afternoon. During the seven days above mentioned, the temperature of the middle frontal station averaged 96¼°; that of the middle occipital, 95¼°; right frontal, 95°; left frontal, 94 7/10°; right parietal, 94 7/10°; left parietal, 94 4/10°. The highest temperature at any one time was that of the middle frontal station; the next highest that of the middle occipital. The middle frontal station was that nearest to the tumor. The high temperature of the middle occipital station was due, no doubt, both to the fact that the patient lay so much on the back of his head, and also to the concurrence of sinuses at that point.

All the temperature records which were obtained from surface thermometry of the head during these seven days, were *higher* than the average normal temperature of the head.

At the *autopsy*, which was made six hours after death, the body was not emaciated and the muscles were in fair condition. The left eye was slightly in-

flamed. The calvarium was found to be adherent to the dura mater. Both dura and pia mater were injected.

A large tumor was found seated in the right frontal lobe, three inches in length, three and one-half inches in depth, and two and one-half inches in width. The tumor had destroyed the anterior half of the first frontal convolution and of the second frontal convolution. It had also destroyed the anterior half-inch of the corpus callosum and a segment of the gyrus formicatus. It did not encroach upon the third frontal convolution.

The hemispheres of the brain were found to be thrust widely apart. The tumor had taken its origin from the substance of the frontal lobe. It had an irregular, nodulated surface, was pyriform in shape, and was partially surrounded by a firm and dense capsule. The tumor turned out to be a fibroma. There were numerous evidences of true congestion throughout the brain. The brain was consistent, and was found to weigh the enormous amount of ℥ lxii. (62). There were no cysts or clots, and no meningitis.

DR. MILLS considered that his experiments had assisted in establishing the fact that the frontal lobes of the brain are the inhibitory centres which are at the basis of attention. He also thought that his experiments had shown that the temperature of parts adjacent to a cerebral tumor was raised above that of the rest of the head. In one of Ferrier's experiments with monkeys, as in the present case, there was marked nystagmus. There was no true paralysis.

In answer to the question as to how the patient came to use his arms and hands intelligently, Dr. Mills was of the opinion that the movements were largely reflex.

DR. H. LENOX HODGE wished to call attention to two points of great interest in the case. In the first place, the locality of the tumor had been determined by the patient's symptoms; and, in the second place, the writer claimed to have obtained excellent results from surface thermometry. He thought, however, that observers should be very cautious in accepting the results of surface thermometry. It was still a matter of doubt in his mind as to whether a thermometer applied to the outer surface of the head was able to gauge with absolute certainty the temperature changes of the brain substance.

In answer to a query regarding the possibility of an encapsulated tumor's eating away the brain-substance, Dr. Mills stated that the tumor was partially capsulated and partly free.

DR. JOHN GUITERAS had known of cases of destruction of the anterior lobes of the brain without any of the characteristic symptoms of Dr. Mills' case. He was glad to see that Dr. Mills had been able to verify the experiments of Broca and of other experimenters in the same field. He thought that it was now definitely settled that using either side of the body caused the temperature of the opposite side of the brain to rise. He thought that lesions of the cortical substance of the brain were those likely to give rise to sclerosis. The corpus callosum he believed was concerned in controlling the temperature of the body.

DR. MILLS closed the discussion with a demonstration upon the blackboard of his modification of E. C. Seguin's surface thermometer. The sole objection to Dr. Seguin's instrument, to his mind, lay in the fact that the results obtained by it were only too likely to be affected by slight changes in the temperature of the surrounding air. For the purpose of removing this element of uncertainty in the use of the instrument, he had devised the following modification: Taking a common test-tube, he had placed two corks in it, one about half-way between its mouth and the bottom, and one on a level with the mouth. In these two corks he had suspended a Seguin thermometer, with its tube projecting beyond the second cork and its bulb on a level with the outer surface of the lower cork, so that, in placing the apparatus against the head, the mouth of the test-tube and the outer surface of the lower cork and the lower or flat surface of the bulb would all touch the skin. Another advantage in this modification he thought rested in the fact that the height of the mercury was not affected by the heat of the fingers, since the fingers grasped not the tube of the thermometer, but the end of the test-tube.

DR. MILLS understood that in one of Broca's cases of cerebral emboli, the local temperature was found to be lower than that of the rest of the head. His experiments had proved that this rule was reversed in cerebral tumors.

Correspondence.

THE PREVENTION OF YELLOW FEVER.

HON. R. B. HAYES, *President.*

SIR:—In compliance with your suggestion made at the short interview I had with you, I submit in writing the proposition which will go very far to prevent the introduction of yellow fever into this country.

Argument.—It is an almost universally admitted opinion of the medical profession, founded on long experience and observation, that yellow fever is an *exotic* disease; that whenever it makes its appearance on any part of our extended seaboard it is always brought from without.

While, therefore, the necessity of quarantine restrictions, the nature of which we do not at present propose to argue, are apparent,—no less also the necessity of enlightened sanitary regulations in every threatened locality,—it must also be admitted that if repressive action can be taken at the place of *endémicité*, it will be far more rational and effective than to wait until the scourge is at our thresholds.

Fortunately we are not without analogies in this particular. The countries of Western Europe are situated with respect to cholera, very much as this country is to yellow fever. It was long ago recognized that in these days of active commercial and personal interchange with different countries, no matter how careful might be the sanitary regulations in a given locality, there must of necessity be many others where they were lax, or impossible of application, and where cholera would yearly find ingress. It was found also that the pilgrimages of Mohammedans to the shrine at Mecca, were the principal agents for disseminating the scourge. Pilgrims from the further East in large caravans met those from the shores of the Mediterranean at this common spot, and transmitted to them the infection. They, in returning, distributed it to all countries through which they passed.

International congresses of the countries of Europe were from time to time assembled to consider the most effectual means for the repression of the epidemic. As a result, these governments maintain a corps of medical inspectors at every seaport from Syria extending down the Red Sea, where returning pilgrims undergo quarantine and sanitary inspection before

embarking on the numerous vessels which convey them to their respective countries. Further, not content with this alone, they have impressed upon the Turkish government the necessity of a government sanitary officer, who accompanies each caravan, so that cases of the disease may be removed and isolated on their first appearance. This has now been in operation several years. Thanks to the activity of the French government, which has taken a principal part in these repressive measures, and which yearly isolates hundreds who arrive at the sea-shore, the disease has been of late years almost unknown in Europe.

The same principle may be applied with greater facility by this country with reference to the prevention of yellow fever. Though it yearly makes its appearance in different parts of the West Indies, in Vera Cruz, in the southern hemisphere at Bahia and Rio Janeiro, still there is but *one* principal centre of its propagation, that of Havana,—appearing always later at the other West India ports. If it is totally repressed at Havana, there would be little cause for anxiety so far as any part of this country is concerned.

The epidemic in the ports of the southern hemisphere prevails chiefly during our winter, when there is no apprehension.

It is notorious that the hygienic condition of Havana is very defective; that the merchant marine are compelled by the peculiarity of the location to lie in the focus of all the impurities, and stifling exhalations; and that, as a result, no vessel can remain there any length of time without becoming herself infected, and the crew the victims of the malady.

Without being myself personally cognizant of the condition, yet from years of intercourse with those whose whole business is with that port, and who from necessity have studied the modes of propagation of the fever, I am safe in asserting that all this can be changed, and the disease in a great measure stamped out. It is not necessary in this communication to detail the particular conditions of the locality, nor its facilities for remedy; but that it is possible to remedy existing defects is admitted by every one familiar with them.

I therefore submit the following practical *proposition:* That the government of Spain be solicited to unite with this government in the appointment of an International Commission, who shall proceed to Havana, with a view to examine the sanitary surroundings of that city and their relations to the propagation of the scourge, and that the Spanish Government be earnestly requested to carry out fully the joint recommendations of such commission.

S. OAKLEY VANDERPOEL, M.D.,
Health Officer Port of New York.

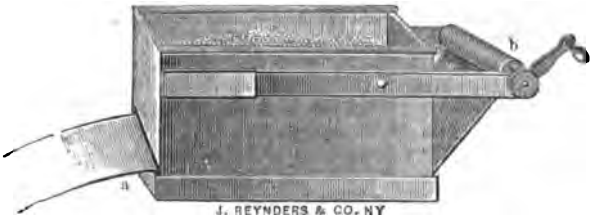
QUARANTINE, Nov. 27, 1878.

New Instruments.

A NEW APPARATUS FOR MAKING PLASTER-OF-PARIS BANDAGES.

THE annexed engraving illustrates an apparatus for making plaster-of-Paris bandages, which has been perfected by Messrs. John Reynders & Co., of this city. It makes the bandages and rolls them up, ready for immersion. It consists of a box having a narrow opening in the front and in the back, situated slightly above the bottom, through which the bandage is to pass. At (b) the arrangement is shown for rolling up the bandages. To ensure even distribution of the plaster on the bandage, it passes over a roller over the front opening nearest (b).

To make plaster-of-Paris bandages, the plain bandage is inserted at (a), passed along the bottom of the



box, through the opposite opening and the end attached to the roller (b). The box is then filled with plaster-of-Paris, and the bandage rolled up. The roller is so arranged that the bandage can then be readily removed. The rolling arrangement can be removed from the sides of the box and kept in the same when not in use. A cover for the box prevents the escape of plaster dust while the machine is being operated.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 1st to December 7th, 1878.

PAULDING, H. O., 1st Lieut. and Asst. Surgeon. Assigned to duty as Post Surgeon at Cheyenne Agency, D. T. S. O. 140, Dept. of Dakota, Nov. 25, 1878.

SEMIG, B. G., 1st Lieut. and Asst. Surgeon. Granted leave of absence for two months. S. O. 260, A. G. O., Dec 4, 1878.

FINLEY, J. A., 1st Lieut. and Asst. Surgeon. Granted leave of absence for one month. S. O. 220, Dept. of the Missouri, Dec. 3, 1878.

DE LOFFRE, A. A., 1st Lieut. and Asst. Surgeon. Granted leave of absence for four months. S. O. 260, C. S., A. G. O.

TAYLOR, B. D., 1st Lieut. and Asst. Surgeon. Assigned to duty at Fort A. Lincoln, D. T. S. O. 140, C. S., Dept. of Dakota.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 7, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Nov. 30, 1878.	0	10	100	3	3	53	0	0
Dec. 7, 1878..	0	7	120	1	8	55	0	0

WEEKLY BULLETIN OF THE PUBLIC HEALTH issued by the Surgeon-General of the Marine Hospital Service, Dec. 11, 1878, for the week ending Dec. 7th.

Yellow fever has almost wholly disappeared from the Mississippi Valley. In *New Orleans* 4 deaths were

reported last week. The total number of cases up to date is reported as 22,600. There was 1 death and 1 new case at Port Gibson. One new case, a returned refugee, at Meridian, and 1 death at Memphis on Dec. 6th.

Baltimore.—For the week ending Dec. 7th, the total deaths were 120; 20 cases of enteric fever and 5 deaths; 5 cases of diphtheria, and 1 death. Pneumonia prevalent.

Brooklyn.—For the week ending Nov. 30th, 155 deaths from all causes. Annual ratio per 1,000 of the population, 14.68. 41 cases of scarlet fever, and 6 deaths; 37 cases of diphtheria, and 12 deaths; 22 deaths from phthisis; 36 from other pulmonary diseases. Week ending Dec. 7th, *reported* deaths from all causes, 175. Rate 16.6. 38 cases and 6 deaths from scarlet fever; 33 cases and 12 deaths from diphtheria.

New York.—Week ending Dec. 7th, deaths from all causes, 455. 28 deaths from scarlet fever, 19 from diphtheria, 74 from phthisis, 49 from pneumonia, 17 from bronchitis. During 1878 only 2 deaths from small-pox have occurred in the city; this immunity is attributed to the efficient system of free vaccination that is carried out.

Philadelphia. — Week ending Nov. 30th, total deaths, 299. Annual rate, 17.75. 7 deaths from diphtheria (minors); 6 deaths from scarlet fever; 8 from enteric fever; 53 from phthisis; 20 from pneumonia.

Cleveland.—Week ending Dec. 7th, total deaths, 49; 7 cases of scarlet fever, 5 deaths; 23 cases of diphtheria, 8 deaths.

Milwaukee.—Week ending Dec. 7th, deaths from all causes, 38; 20 cases of diphtheria, 9 deaths.

Savannah.—For the week ending Nov. 29th, the deaths were 29. The rate, 47. 10 deaths from zymotic diseases. For week ending Dec. 7th, deaths, 12; rate 22.

Nashville.—For the *month* ending Nov. 30th, the total deaths were 40. Annual death-rate for the month per 1,000, 14.76, 11.42 per 1,000 in the white, 20.87 per 1,000 in the colored population.

Lynchburg, Va.—For the month ending Nov. 30th, total deaths, 23. Annual rate, 30.

Great Britain.—Week ending Nov. 16th, in 23 of the largest cities of the United Kingdom there were 5,637 births and 3,993 deaths, an annual rate per 1,000 of 35.1 and 24.9 per 1,000 respectively, the death-rate ranging from 14 at Leicester and 17 at Portsmouth and Brighton to 32 at Liverpool.

London.—The total deaths for the week were 1,665, a rate of 24.5 against 20.2 and 23.2 in the two preceding weeks. There were 434 deaths from pulmonary diseases, 269 being from bronchitis; 206 deaths were from zymotic diseases, 64 being due to scarlet fever, 16 to small-pox. No death from the latter disease occurred in any of the other 19 large cities of England.

Liverpool.—For the week ending Nov. 16th, total deaths, 322. Annual rate, 31.5. 59 deaths from scarlet fever, 2 from diphtheria.

Edinburgh.—In the week ending Nov. 16th the death-rate fell from 23 in the previous week to 16, with only 2 deaths from zymotic diseases.

In *Glasgow*, in the same time, the rate rose from 21 to 26.

Dublin.—In the week ending Nov. 16th, total deaths, 176. Annual rate, 30. From zymotic diseases, 39 deaths, phthisis causing 32, other pulmonary diseases, 42. There were 42 cases of small-pox in the hospitals, and 11 deaths from the disease.

India, Madras.—Enteric fever of a fatal type is very prevalent in the native portions of the city, which are described as very filthy. In 1876 and 1877 the deaths from small-pox in India amounted to 200,000; in the preceding two years, to 500,000. During 1875 and 1876 only two deaths from this disease occurred among 120,000 European troops, the immunity being clearly due to vaccination.

Africa, Tangier.—During the four weeks preceding Oct. 5th there were 1,069 deaths at Casa Blanca from cholera; 163 from small-pox; 32 from typhus fever. Total deaths from these diseases being 1,264 in a population estimated at 5,500.

Havana.—During the week ending Dec. 7th there were 10 deaths from yellow fever, and 12 from small-pox.

St. Thomas.—The U. S. consul telegraphs, Dec. 6th, that yellow fever has appeared.—JNO. M. WOODWORTH, *Surgeon-General U. S. Marine Hospital Service.*

DR. J. C. CULBERTSON, of Cincinnati, editor of the *Cincinnati Lancet and Clinic*, has been on a short visit to this city.

DR. ANDREW CLARK, F.R.C.P. of London, delivered a lecture on the Varieties of Phthisis, at Bellevue Hospital Medical College, to a large audience of students and medical men, on Tuesday afternoon, December 10th (*vide* page 461).

At the conclusion of the lecture, Prof. James R. Wood, M.D., on behalf of the profession of New York and of the College, thanked the gentleman for his discourse, and said many pleasant and appropriate things bearing upon the cordiality of feeling between the profession of this country and that of Great Britain. Dr. Clark responded by reiterating the sentiments, after which the audience dispersed. During his short visit to this city Dr. Clark has been the guest of Prof. L. A. Sayre, and has taken every opportunity for visiting the various public institutions, and for studying our methods of medical education. On Tuesday evening Dr. Sayre tendered him a reception, at which a number of distinguished medical men were present. At its close, receiving the heartiest wishes for a pleasant voyage, he left for the steamer.

BULLETINS OF HEALTH.—As soon as practicable after January 1st, 1879, the Bulletins of Health will be printed in tabular form, and much extended. It is desirable that health officers and registrars of vital statistics who have been asked to furnish information should forward their mortality returns as promptly as possible, thereby contributing greatly to the practical value of the bulletin.

TETANUS FROM A HYPODERMIC INJECTION OF QUININE.—Dr. A. Ady, of West Liberty, Iowa, writes: "On the 19th of this month I injected fifteen grains of bromide of quinia, dissolved in thirty minims of dilute alcohol, into the cellular tissue above the crest of the left ilium of a man aged sixty-two years, for an intractable periodic neuralgia in that position. The neuralgia was relieved, but there was more than ordinary inflammation at the site of injection, followed by a forming slough. It gave him considerable pain on the 21st and 22d, when morphia was ordered sufficient to relieve him. During the 23d and 24th he was reasonably comfortable, and sat up most of the afternoon, Sunday, entertaining company. Upon retiring, at 10 P.M., he was seized with tetanus, and died in twenty-three hours. I have been intimate with him for twenty-six years, and, with the exception of occasional attacks of this neuralgia, he has enjoyed uninterrupted health."

Original Lectures.

VARIETIES OF PULMONARY PHTHISIS.

A LECTURE DELIVERED IN BELLEVUE HOSPITAL MEDICAL COLLEGE, DEC. 10, 1878.

BY ANDREW CLARK, F.R.C.P., OF LONDON,

PHYSICIAN TO THE LONDON HOSPITAL FOR DISEASES OF THE CHEST; LECTURER ON CLINICAL MEDICINE AND DISEASES OF THE LUNG IN LONDON HOSPITAL, ETC., ETC.

(Phonographically reported for THE MEDICAL RECORD.)

PART II.

GENTLEMEN:—Now, in the second classification, we have a caseous pneumonic phthisis. The history of this form of phthisis is almost the reverse of that of tubercular phthisis. In tubercular phthisis the constitutional symptoms are profound, while the local symptoms are comparatively few. In the cases I am now describing we have an abundance of local symptoms. By physical examination perhaps one-quarter, one-third, or one-half of an upper lobe of a lung may be found to be uniformly solid. You will have dulness and tubular breathing, which may be accompanied or not by crackling. You may have bronchophony, but the constitutional symptoms are often few. The patient looks fair, has a bright eye, is well nourished, and perhaps slaps his chest and says, "But for this cough I would be quite well." Perhaps the disease has come on insidiously. Perhaps by inflammation not so severe as croupous pneumonia, and the case itself runs for an indefinite time until a certain change takes place which brings it within the pale of serious cases of phthisis.

Suppose, then, we have a case of pneumonic phthisis with unbroken consolidation of the lung or only a few small cavities. The patient is tolerably well, engages in his work, complains comparatively little of constitutional symptoms. By and by the caseous pneumonia breaks up into large cavities, and sooner or later the opposite lung may become affected either by the deposit of tubercles or by the formation of little patches of lobular pneumonia.

Here again the subject is full of complexities and we are in a little difficulty. Sometimes cases of caseous pneumonic phthisis are slow, subacute, almost chronic. But there is a certain section of these cases which is extremely rapid. There are those cases in which the fever rises and the deposit in the upper part of the lung breaks down rapidly, and within four, five, or six weeks the patient dies with all the symptoms of phthisis. These may be called cases of acute caseous pneumonic phthisis, and answers to the true galloping consumption of our forefathers.

Now, passing from this caseous pneumonic phthisis, I will make the following additional statement: The usual rule with tubercular phthisis is death. I do not say there are no exceptions to this; perhaps cases of tubercular phthisis may get better, but they are few. It is in cases of pneumonic phthisis no doubt that the greatest number of recoveries take place, and they take place in one of several ways. Sometimes the exuded caseous pneumonic stuff undergoes fatty metamorphosis and is really absorbed. In other cases the caseous matter, not being quite melted and absorbed, a kind of fibroid change takes place in the lung. It gets hardened, perhaps the bronchial tubes are a little dilated, and the whole affair settles down into a hardened mass. Sometimes these cases of caseous pneumonic phthisis, whilst destruction is going on, yet develop secondary fibroid change, which does the same for these cases as for those of tuberculous phthisis.

I have said that occasional cases of tubercular phthisis progress slow, and in proportion to the amount of fibroid degeneration. So it is in caseous pneumonic phthisis; for, if it excites a secondary fibroid degeneration the progress is exceedingly slow.

Now we come to speak of the cases which I have classified as fibroid phthisis. The chief clinical characters of fibroid phthisis are these: First it is, as a rule, a-febrile. The pulse is quiet, and the general health is but little disturbed. The second point is, that usually, not invariably, there is, just as in the case of croupous pneumonia, a history of some inflammation. It may be a pleurisy, very often it is so; it may be a pneumonia, which has been unabsorbed and converted into fibroid mass, or it may be an irreducible recurring bronchitis which has caused the development of fibroid tissue; and lastly, but rarely, it may be due to some constitutional disease, such as syphilis or cancer. But the main point is, that while it has such a history it is almost always unilateral, while tubercular phthisis is almost invariably bilateral sooner or later. Pneumonic phthisis may be or it may not be unilateral. Fibroid phthisis is in ninety-nine cases out of a hundred unilateral. The local signs of fibroid phthisis are extreme contraction, with pronounced friction-sounds and displacement of organs. With these few points I will narrate the history of one case of fibroid phthisis which will enable you to understand better what you are to expect in these cases than you would from a mere description.

Here is an illustration of an interesting lung which was converted into fibroid mass, was surrounded by an enormous thickening of the pleura, and had upon its summit about an inch of fat, an appearance which I have never seen before or since, although I have examined over four thousand bodies. The subject from whom the lung was taken was my first patient in the London Hospital some three-and-twenty years ago. When he came to me he was a stout man, about fifteen or sixteen stone in weight, and complained of cough and spitting of blood. At that time I did not know much about lung diseases. I examined the man with the utmost care and found nothing. But from the history of the case I thought perhaps he might be suffering from some internal growth, such as an aneurism, or something of that kind. I afterwards learned that he had been under the charge of the surgeon at the other end of the hospital, for a fractured rib, from which he had recovered. I took an interest in the man, but months passed before I discovered anything. The first thing which I noticed was a little crepitation, and the next a little contraction of the right side. By and by he began to have violent paroxysms of cough, which often ended in retching and discharge of fœtid muco-pus from the lung. Then more and more progressively the right side of the chest contracted; the heart was now pulled from the left to the right side; next he began to fail, and a bluish condition of the skin made its appearance. I watched him, and from year to year I found the symptoms steadily increasing. It was, perhaps, at the end of ten years when I exhibited him to my colleagues. He complained that he had a paroxysmal cough, which ended in vomiting and the expulsion of muco-pus, which was sometimes fœtid and sometimes not. He had severe pain in the right side, and that beyond being a little weak and exhausted by the cough he had nothing else to complain of. The physical signs were these: The right side of the chest was contracted. The right arm was slightly

swollen, and the fingers were slightly swollen and bluish. The heart was drawn considerably to the right side; there was dulness over the right side of the chest; there was bronchophony; there was an increase of vocal resonance, and a metallic crepitation accompanied them.

When I exhibited him to my colleagues, they were all of the opinion that he had some growth in the right lung. Well, he went on, the heart becoming more and more drawn to the right side, and finally his skin began to get dry, and he became the subject of albuminuria.

I may here mention, that this is another clinical fact connected with fibrous phthisis. At last the poor man became exhausted, and died.

At post-mortem examination the left lung was found perfectly healthy; I may say, every organ of the body was sufficiently healthy to require no notice, except, perhaps, the kidneys, which were slightly congested, and slightly harder than normal. The right lung contained nothing whatever which by any possibility could be called tubercle. It was clear, therefore, that the fractured rib had set up in the pleura a fibroid change which had invaded the lung, caused its contraction, and ultimately gave rise to the symptoms which ended in death.

With your permission, I will mention just one other case. It is a case which was brought to me by Dr. Pollock, of the Charing-Cross Hospital. This patient sprung from a bronchitic family, and had repeated attacks of bronchitis and severe attacks of pleurisy. When the patient was brought to me there was complete dulness, diminished tactile and vocal fremitus, loud bronchial breathing, bronchophony, and a metallic character to the resonance. His symptoms were paroxysmal cough, often ending in vomiting, and dyspnœa, but no fever.

This case was examined by several physicians, and seven years ago was reported before the Clinical Society of London as a case of tubercular phthisis. Not long ago he died, evidently from an attack of acute bronchitis, brought on from exposure to cold; but before death there was a small quantity of albumen in the urine.

When examined after death these appearances were found: The right lung was perfectly solid; through it ran dilated bronchial tubes, and in the solid portion there were several ulcerations producing cavities.

I have now in my wards, in the London Hospital, three cases, in different degrees of development, which illustrate one of the modes in which fibroid phthisis arises.

The first is the case of a man called Tenny. He is a thin, pale, and delicate man. He is liable to cough with expectoration; but he says he is pretty well, except that he is very delicate. The remarkable feature about the man is, that he has scarcely any lung to breathe by.

His chest seems contracted, and he presents an appearance such as is seen in advanced phthisis; but it is not a case of phthisis at all. The more careful examination you make the more sure you are that you are dealing with a man who has semi-solid, contracted lungs, with but little space left for breathing, and, perhaps, slightly dilated bronchial tubes which hold a small amount of secretion. But there is no evidence of destruction of lung-tissue, and he has had a kind of interstitial pneumonia for many years.

I have watched him from the beginning of the symptoms, which are like those in the other cases described.

The second case is that of a man called Douglas. He is in the position of having a contracted left lung, with crepitation all over it; bronchial breathing and bronchophony; but otherwise he is in tolerable good health. He, too, has the history of the third case.

The third case is that of a man who has been under observation for some time, but whose name I forget. But he has an irreducible fibrous pleurisy. He declares that he is perfectly well, and it is only by the greatest strategy and ingenuity that we are able to keep him in our wards. It astonishes him that we should be so anxious to have him remain with us. But we are very desirous that he should do so, in order that he may be utilized for purposes of our common instruction.

But the moment the hand is placed on the chest you feel a friction motion, and, over almost the entire chest, you can hear the to-and-fro friction sound. This is an example of the beginning of these cases. Tenny's difficulty began in this way. They come into the hospital with some pain in the side, with little or no effusion in pleural cavity; probably an effusion has been present at some time, and they get apparently well; but the to-and-fro friction sound remains in some cases.

In none of these cases have I been able to render any therapeutical service whatever.

In the last case it will be my endeavor to keep the patient in the hospital, so that I can trace the clinical history through its entire course.

I will just say, however, with reference to these illustrations, that, if you will cast your eye backward, I think you cannot fail to see, first, that there is sufficient ground for the pathological distinction; and, second, if I could reproduce in your minds, as clearly as I see them in my own, the clinical distinctions, I am sure you will accord with me that there is a clinical diagnosis in phthisis, and that it is just and proper that it should be recognized; for if they are different in origin, different in modes of development and progress, therefore necessarily different in treatment, and different in issue, it is but right, whether the destructive agent is distinct in structure or is homologous, that we should have a separate name to represent things which, at all events, are different in their apparent nature.

LECTURES ON CLUB-FOOT.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK (SPECIAL COURSE).

BY JOS. C. HUTCHISON, M.D.,

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LECTURE IV.

Tenotomy.—When the foot cannot be restored by manipulation to its normal relation with the leg, or when the os calcis is elevated in a marked degree so that the foot cannot be flexed nearly to a right angle with the leg, tenotomy is absolutely necessary. It is not impossible even in such a case as this to accomplish a cure sometimes by mechanical appliances alone, but the length of time requisite to obtain a cure will often exhaust the patience and perseverance of both surgeon and patient, and the child is frequently abandoned to its fate. Experience has also satisfied me that relapses are much more common in severe cases when they are treated without tenotomy. It is a mere waste of time to attempt the cure of such cases by the employment of apparatus alone. For the reasons already

given tenotomy should be practised as early as the third month, if the child is in good health.

The treatment of talipes varus by operation consists in the subcutaneous division of the tendons of the contracted flexor and extensor muscles of the foot, which, by their contraction, resist the restoration of the foot to its normal position by mechanical and other means. The most powerful of these muscles—those which exert the greatest influence in opposing the reduction of the deformity—are the triceps suræ, which, as we have shown, not only *extend* the foot at the ankle-joint, but also *adduct* it, and move it in the astragalo-calcanean joint, and, in addition to this, powerfully resist the abduction of the foot and are sufficient to produce slight cases of club-foot.

The operative treatment, as practised by the English surgeons, Adams, Broadhurst, Little, and Tamplin, consists, in a majority of cases, in the division of the tendo Achillis and the tendons of the tibialis anticus, tibialis posticus, flexor longus digitorum, and in some cases the extensor longus hallucis and the plantar fascia. They divide the operative treatment into two stages: First, the varus is converted into equinus by cutting the tibial and long flexor tendons and gradually everting the foot by mechanical means; secondly, after the deformity is transformed into a simple equinus, the tendo Achillis is divided and the extension at the ankle-joint is reduced. During a number of years I faithfully followed the rules established by the English surgeons, and the results were quite satisfactory to myself and to my patients; but it occasionally happened that I omitted to divide the posterior tibial tendon in very fleshy children on account of the danger of dividing the long flexor of the great toe, and of wounding the posterior tibial artery, which lies in close proximity to the tendon (the danger being much increased in fleshy children), and still obtained the same satisfactory results. This experience induced me to abandon gradually the English method of treatment, and for some years past I have limited the operative treatment, in a majority of cases, to the division of the tendo Achillis for the following reasons: 1. The section of six or eight tendons, which is often done by the English orthopedists, where both feet are deformed, is of itself a matter of no small consequence. 2. When the deformity is severe and the resistance offered to the reduction of the foot considerable, it requires a long time to abduct the foot and rotate it outward, whether the tendons of the tibial muscles have been divided or not, which is evidence that the deformity depends on another cause than the contraction of these muscles. 3. In most cases I find that no operative treatment is necessary except the division of the tendo Achillis.

You will observe, gentlemen, I do not claim that the operative treatment for varus can be limited in all cases to the division of the tendo Achillis. But I have no hesitation in saying that a majority of the cases in young subjects, even when severe, can be completely cured by limiting the operation to this tendon; the tibial tendons and the plantar fascia generally yield readily after this division. If, however, they resist the reduction of the deformity after the section of the tendo Achillis and the use of appropriate mechanical appliances for four or six weeks, it may become necessary to divide them also. It is impossible to lay down any definite rule as to which tendon may require section in such cases; we must be governed in our action by the peculiarities of each case and divide any tendons that resist the reduction of the deformity.

The division of the *tendo Achillis*, as performed at the present day, is a perfectly safe and simple operation. The surgeon, having everything in readiness for the operation, places the patient on his abdomen with the foot hanging over the edge of the table, an assistant steadies the limb, while the surgeon grasps the foot with one hand, and forcibly flexes it so as to put the tendon on the stretch. He then, with a tenotome, punctures the skin close to the inner border of the tendon, from half an inch to an inch and a quarter, according to the age of the patient, above its insertion, and carries it obliquely downward (Adams) beneath the tendon to its opposite side. He then turns the edge of the knife toward the tendon, depresses the handle and divides the tendon with a clean, transverse cut; the knife is now withdrawn flatwise so as not to enlarge the external wound. I must caution you against putting the tendon too violently on the stretch, lest the knife be carried entirely through the integument and thus convert a subcutaneous wound into an open one, with its attendant consequences of suppuration, etc. I have said that the operation is a perfectly simple and safe one, but it should be remembered that the posterior tibial artery is placed at the inner edge of the tendon superiorly;

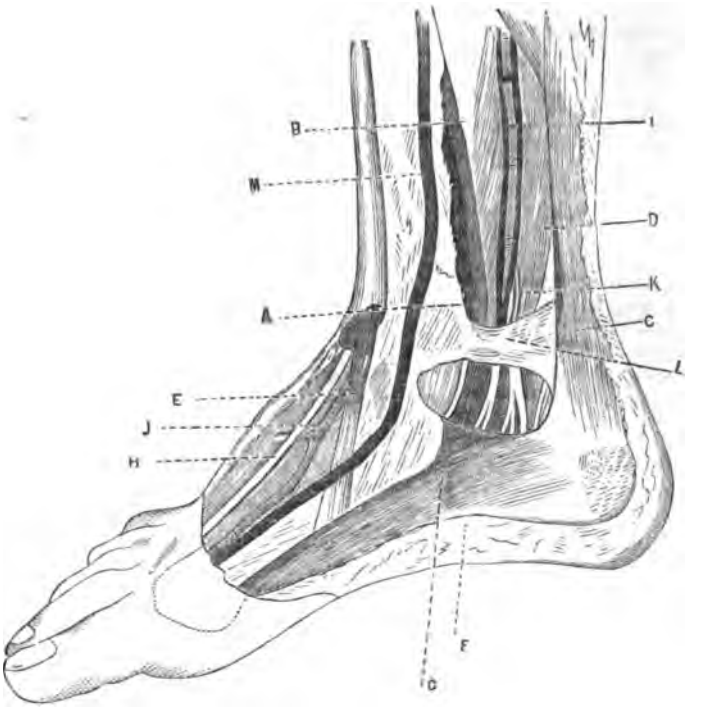

FIG. 14.—Relation of tendons divided in varus and equinus. (Erichsen.)

A, Tibialis posticus. Point at which cut.
B, Flexor longus digitorum.
C, Tendo Achillis. Point at which cut.
D, Flexor longus pollicis.
E, Tibialis anticus. Point at which cut.
F, Plantar fascia.
G, Abductor pollicis.
H, Extensor longus pollicis.
I, Posterior tibial artery.
J, Dorsalis pedis artery.
K, Posterior tibial nerve.
L, Part of annular ligament.
M, Saphena vein.

it becomes detached about the middle of the tendon and is entirely separated from it at the inferior portion. (Fig. 14.) The artery is accompanied in all its course by two large veins, and by the posterior tibial nerve. Now, we are warned by these facts, that if the tendon is divided too high up, the artery, the veins, or even the nerve may be wounded, and if, on the contrary, the section is made too low down, there will be danger of opening the synovial bursa, which is interposed between the tendon and the upper part of the tuberosity of the os calcis. You can understand now the importance of the direction to divide the tendon in adults fifteen lines above the os calcis, while the point of division in infants must be varied according to the child's age; but it ought never to be less than five or six lines from the heel. In infantile congenital cases the division of the tendon is indicated by a snap, and the divided ends separate so as to leave a gap at the seat of division. In adult cases, and in those of paralytic origin, there is no audible snap, and the divided ends of the tendon are separated to a very slight degree, owing to the rigidity of the ligaments of the joints and the paralyzed condition of the muscles. It sometimes happens that a few of the fibres of the tendon escape division, in which case the knife should be reintroduced and the section completed.

The *tendon of the tibialis anticus muscle* is usually so prominent under the skin as to make its division remarkably easy and free from danger, as it is not enclosed in a synovial sheath, and the arteria dorsalis pedis, besides being deeply seated, is placed on the external side of the extensor proprius pollicis pedis. It should be divided, as it passes over the ankle-joint, by entering the knife close to the tendon upon its outer side, so as to avoid the artery, carrying it beneath the tendon and dividing it from below upward towards the skin.

The *tendon of the tibialis posticus muscle* is in many cases divided with difficulty, and the operation is by no means free from danger on account of its proximity to the posterior tibial artery. Fortunately, its division is rarely necessary. I have adopted the following method: The child is laid upon its back and the leg and foot firmly held by an assistant; the latter is everted, so that the inner side looks directly upward. Now place the thumb of the left hand on the posterior edge of the tibia as a guide, and puncture the skin with a sharp-pointed tenotome, half an inch above the inner malleolus, and open the sheath of the tendon freely. The blunt-pointed tenotome, which should always be used in this operation, is then passed into the wound, and keeping its flat surface close to the bone, it is slipped between the bone and the tendon, the edge turned against the tendon which is divided, whilst the assistant forcibly abducts the foot. In the leg of a fat infant the inner edge of the malleolus and the posterior edge of the tibia cannot be distinctly defined; and for cases of this sort, which are by no means infrequent, we should adopt the plan of Dr. Little, viz.: taking the antero-posterior diameter of the leg, make the puncture exactly in the centre of this line. I must beg you to bear in mind that this tendon should never be divided unless the necessity for the operation is clearly demonstrated, because, in addition to the reasons already given, this and all other tendons that run through tubular sheaths often fail to unite after they have been divided. The *plantar fascia* is sometimes so contracted as to offer a serious impediment to the restoration of the foot, and requires to be divided in order to overcome the shortening of the foot, and to expand its longitudinal arch. The operation is rarely necessary in infantile cases and in childhood, but is more frequently required in adults. It is usually sufficient to sever the inner division of the fascia, but we may also find it necessary to divide the central division. The operation consists in puncturing the skin close to the inner edge of the inner division, and then introducing a tenotome behind the fascia as close to it as possible, and dividing it towards the skin.

At what time is it desirable to begin to straighten the foot? Stromeyer has shown that reunion of the tendons may be complete at the end of the fifth day, and that the tendinous exudation solidifies so rapidly that in ten days it may be impossible to reduce the deformity. I have adopted the rule to commence the mechanical treatment on the fourth day. The plan is to remove the plaster splint which was applied immediately after tenotomy, wash the foot well, apply another plaster splint, force the foot towards its normal position in the manner already described, and hold it until the plaster sets. This splint should be re-applied every third or fourth day, and each time when it is removed the foot should be washed and rubbed and the articulations loosened as much as possible by passive movements, in order to restore the freedom of the joints. The foot should be brought gradually to its normal position, and even into the position of varus, by increasing the extension somewhat each time the plaster dressing is applied. The deformity can usually be reduced in the course of two or three weeks without undue pressure upon any part of the foot, and without the slightest pain. It should now be put into the club-foot shoe (Fig. 12), which will hold the foot in the normal position without pain and inconvenience. The shoe must be removed night and morning, and the ankle and transverse tarsal joints manipulated for fifteen minutes by the mother, and the muscles, especially the peronei, should be well shampooed. This shoe should be replaced at night by the felt shoe. The object of gradual extension is to regulate the length of the new material which is formed, and to unite the divided extremities of the tendon. When the extension is excessive the new material may be elongated so as to make the reunion imperfect, or even prevent it from taking place altogether, and a previously healthy muscle may have its strength materially impaired, or it may even be rendered useless. Standing and walking on the foot will contribute essentially to remove the last traces of the deformity.

How long shall this treatment be continued? We answer, until the deformity is overcome and the natural movements of the joints are entirely restored. The time required to accomplish this will depend on the age of the patient and the kind and degree of rigidity which the case presents. After the division of the tendo Achillis, the chief resistance to reduction is offered by the ligaments; occasionally, however, the tibial muscles refuse to yield to mechanical treatment, and the division of one or both becomes necessary. In severe cases, in which the deformity has been considerable, and the resistance to reduction obstinate, it may be necessary to continue the treatment for eight or twelve months. For a longer period than this, even, the foot may exhibit a tendency to return to its abnormal position, and, so long as this tendency exists, the treatment should be continued. Relapses frequently occur from a neglect of this important rule. When the deformity has been entirely removed, and free motion obtained in the joints, the child should wear, during the daytime, the boot which I now show you. (Fig. 15.) It differs from an ordinary leather

shoe in being open farther down in front, so that the foot can be introduced with greater ease; to this is added a steel plate fastened to the outer side of the heel, with a movable joint to correspond with the ankle, and connected above with a strap encircling the calf of the leg. This boot maintains the joints in their normal position during growth, and assists the muscles in acquiring symmetrical action.

The physiological treatment, consisting of frictions with dry, hot flannels, passive motion, electricity, etc., as I have previously described, should be rigorously pursued. It has an important influence in overcoming the deformity and in restoring the functions of the muscles and joints. The re-establishment of the functions of the foot is scarcely less important than the removal of the deformity. If the treatment is limited merely to overcoming the distortion of the foot by operative and mechanical means, very little benefit will have been conferred upon the patient. The gait will be awkward and inelastic from the want of normal movements in the articulations, and there will be great danger of a recurrence of the deformity.

Congenital varus is frequently accompanied by a bad condition of the ligaments of the knee-joint,

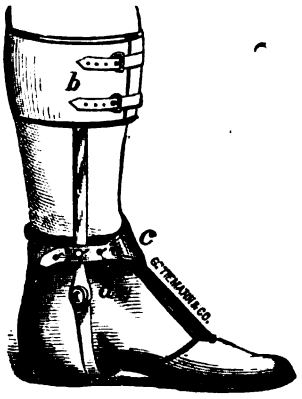

FIG. 15.

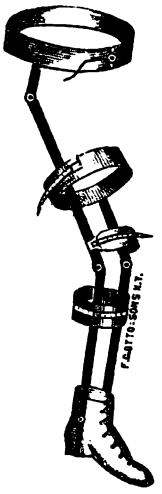

FIG. 16.

which allows the leg and foot to turn inward in the act of walking, even after the deformity has been cured, and free motion at the ankle-joint has been restored. In order to control this tendency to inversion of the foot, a retentive apparatus must be used which extends above the hip-joint and is connected with a pelvic belt. Such an appliance I here show you. (Fig. 16.) The pelvic belt is made oval so as to prevent its turning upon the body, and the perpendicular stem is thus kept in a line with the body, while the foot may be set to any degree of obliquity by the position of the shoe in the plate to which it is attached. The instrument should be worn as long as any tendency to inversion exists.

The treatment of talipes varus which I have recommended differs in some important respects from that pursued by the English orthopedists; but I assure you, gentlemen, I should not have presumed to differ with such high authorities, if I had not subjected the various plans of treatment to the test of actual experience in a considerable number of cases, both in public and private practice. Will you allow me, briefly, to recapitulate the mode of treatment which I employ?

1. A large number of cases of varus can be cured by mechanical means alone, if the foot can be brought by manipulation completely or nearly into its normal relations with the leg. Plaster-of-Paris splints, either without or with tenotomy, should be used, until the deformity is reduced, and then a club-foot shoe should be substituted for it, employed in the manner which I have advised. You need have no apprehensions of having a stiff and unwieldy foot after the cure of the deformity, a result much dreaded by orthopedists who have not used the gypsum splint or have not employed it in the manner I have recommended.

2. In a large majority of cases I limit tenotomy to the tendo Achillis. It is only in exceptional cases of varus that section of any other tendon is required.

3. The physiological treatment should be practised from the beginning and continued until the distortion has been overcome, the motions of the joints restored, and the functions of the muscles re-established. Remember that you have not cured the patient by reducing the deformity; the limb will be of little use unless the functions as well as its form are restored.

Non-congenital talipes varus generally arises from infantile paralysis, caused by the irritation of teething, or from a disturbance of the cerebro-spinal system of nerves occurring during the disorder of childhood; it is also sometimes caused by inflammation or injury of the joint. These cases are not usually seen until after the period of childhood, for although the cause which leads to the deformity generally begins in infancy, the distortion is developed very gradually and the surgeon is not consulted until the inconvenience in walking has become very decided. When all the muscles of the leg are paralyzed, the tendency of the weight of the body is to twist the foot inward during progression, and this tendency is more marked and rapid when the paralysis is limited to the abductor muscles (the peronei extensor longus and sometimes the extensor pollicis). The adductors, having no active opposing force, invert the foot during locomotion. It is important to *diagnosticate* the non-congenital from the congenital form of varus, because the prognosis is much more favorable, as regards the usefulness of the limb, in the latter than in the former variety. In young subjects there is no difficulty in making a diagnosis, but when non-congenital cases are seen in the adult there is often great difficulty in deciding the question, because the characteristic features of the two forms become effaced when the foot has been used in walking for a long time. But the wasted and paralytic condition of the limb, the rounded and smooth external surface of the foot, observed in the non-congenital variety, is in such marked contrast with the definite irregularities and rigidity of the foot in the congenital variety, as to materially assist in the diagnosis even in adult cases.

The prognosis in non-congenital talipes is favorable so far as it relates to the simple removal of the deformity, but as regards the power and usefulness of the limb it is much less favorable than in the congenital form, except in those cases not caused by paralysis.

The treatment of non-congenital talipes is conducted on the same general principles that guide us in the management of the congenital form of the distortion. Tenotomy, however, is only necessary in exceptional cases. The mechanical and physiological treatment is generally sufficient to restore the foot to its normal position, and this is ordinarily accomplished in about one-third the time that is required for the congenital cases, owing to the weakened condition of the muscles and the want of rigidity in the ligamentous struc-

tures. It is necessary to conduct the mechanical treatment more cautiously than in the congenital deformity, in order to avoid sloughs from pressure, which are more likely to take place owing to the paralytic condition and the consequent diminished vitality of the limb. The same appliances may be used that we have advised for congenital talipes, viz., the plaster-of-Paris splint, or the felt splint, until the deformity is reduced; and then an appropriate club-foot shoe, which you must be sure fits the foot accurately and comfortably, may be worn. (Fig. 12.) The physiological treatment is even more important in this form of the disease than in the congenital, and should be thoroughly and persistently applied. When the deformity cannot be reduced by mechanical and physiological treatment, we must, in addition, divide the resisting structures in the manner already described.

After the deformity has been cured it will be necessary, in consequence of the paralytic condition of the limb, for the patient to wear a retentive apparatus for many years. The apparatus which I have shown you before will answer for most cases. (See Fig. 15.) If, however, the paralysis extends to the muscles above the knee, the support should be carried up to the hip-joint and connected with a steel belt around the waist. (See Fig. 16.) The foot should also be supported at night by a felt splint or some simple form of shoe (Fig. 15), in order to prevent a re-contraction of the ligaments and muscles and a consequent return of the deformity.

Before leaving this subject, I must not neglect to call your attention to the operation of excision of one or more of the tarsal bones, which is sometimes practised in old and bad cases of congenital varus in the adult.

The late Mr. Solly, of St. Thomas' Hospital, removed the cuboid in one case, and the operation has been repeated four times successfully by Mr. Davy, of the Westminster Hospital. The latter surgeon has also in three cases removed a wedge-shaped block of the tarsal arch, embracing the cuboid, the head of the astragalus, part of the scaphoid, the base of the little metatarsal and a chip of the external cuneiform bone (*British Medical Journal*, Dec. 15, 1877); and Mr. Davis-Colley, of Guy's Hospital, has performed a similar operation. The astragalus has been removed by Mr. Leard, of Manchester, and by Prof. Erskine Mason, of New York, for the same deformity, the latter gentleman not having been aware that the operation had been previously practised.

I have had no personal experience with these operations, but in confirmed and very aggravated cases the patient is, I think, entitled to the benefits they may confer.

How to Kill Tape-Worms.—Insert a tube into the stomach through the œsophagus; pour through it 200 to 400 gmm. of a very highly concentrated decoction of pomegranate root, the patient having fasted for the previous twenty-four hours. In the short space of three-quarters of an hour to two hours, the tape-worm will be passed, head and all. The patient suffers no nausea.—*Dr. Karl Battelheim, of Vienna*, in *Deutsches Archiv.*

Bryonia and Drosera in Whooping-Cough.—During the catarrhal stage, give the tinct. of bryonia (f 3 ss. daily to a child aged 7 years). During the spasmodic stage, give tincture of drosera (same dose for equal age). Under the action of the latter, the disease very rapidly subsides. So says M. Louvet Lamare in *L'Année Médicale.*

Original Communications.

ON RADICAL TREATMENT OF LOCAL DISEASE AT THE MENOPAUSE.

By G. E. SUSSDORFF, M.D.,

NEW YORK.

(A Paper read before the N. Y. Academy of Medicine, Nov. 7, 1878.)

Part I.

The study of the physiological and pathological aspects of the different epochs which occur in life is full of profound interest, and one of great practical instruction.

It is only after a careful investigation of the physiology of these periods that diseases incidental to them can be understood, and their tendencies, course, and terminations appreciated.

In the early part of life these epochs occur at seven, thirteen, and twenty-one; in the later part of life at forty-two, forty-nine, and sixty-three. These events take place alike in both sexes, but those which occur in the life of the male, and those which occur in the female at seven and sixty-three have no special bearing upon the subject of this paper, and therefore will be omitted.

The beginning of the establishment of menstruation and the age of puberty are of great importance, and bear with positiveness upon this subject, for by comparison with correspondingly critical events in the middle part of life, are of much instruction.

The study of the epoch of the change of life is of as great interest as that of puberty. It is, however, a field which has remained comparatively uncultivated, and has been allowed to continue covered to a great extent with the outgrowth of neglect, and surrounded by a high wall of prejudice.

The physiology and diseases of puberty, it is true, have begun to emerge within a few years from a past of obscurity and misconception, and the patient work of a host of observers is continually throwing additional light upon that era. Not so, however, with the menopause, for, but few are found who labor for its elucidation.

That the period of puberty is one of great importance is unquestioned. It is the period which establishes the great function of reproduction, determines in a great measure future health, and develops the mental, moral, and social qualities.

While this is true of puberty, it is no sound or fair argument to maintain, because the function of reproduction is about to be or has been ended, and the first years of usefulness passed, that the physiology and diseases of the latter part of life are no longer a matter of equal interest.

If it is the duty of the physician to watch and assist at the time of puberty, and after the establishment of the function of reproduction, it is no less his duty to pilot the patient through the perils which attend its decline and suspension, when she perhaps most needs his help and the considerate care of family or friends.

I cannot conceive that better reasons are necessary to make this period one of special study; but others are to be found in the fact of the great indifference existing in regard to the critical nature of this epoch, as demonstrated by the large number of women that annually die from diseases supervening during its progress.

The menopause includes a large field, but the limits of this paper will not admit of an observation of its entire area, and these considerations will therefore be confined as nearly as possible to such aspects as relate to local diseases.

In reviewing the literature of the menopause, one is surprised at the small number of treatises specially written upon the subject, at the cursory notice given to it in systematic works, and the little attention directed to it through the current periodicals of the day. This is remarkably the fact respecting American and English publications, most investigation having been made in Germany and France—indeed, the only work in the English language is at present that of Dr. Tilt, of London. Dr. Tilt remarks upon this point that, "perhaps the deficiencies of medical literature are corrected in the daily practice, though some eminent practitioners are of a different opinion. They do not pretend that nothing is done to relieve the sufferings of women, but not enough; that a placebo is given when systematic treatment is required."

It is well known that in the early part of life, about the age of thirteen, certain developmental changes begin to take place in the system of the female, which, after a certain length of time, culminate in the establishment of menstruation, ovulation, and the reproductive function. During this process one or several of the organs comprising the generative cycle, exceed in influence other organs which compose and regulate the economy, so that the equilibrium which previously existed becomes more or less disturbed. This disturbance is evidenced in a variety of ways, but chiefly by nervous irritability, cephalalgia, and fitfulness of temper, and by painful sensations in the back, abdomen, and lower extremities.

This usually continues from one to two years, when a flow of blood perspired from the womb comes on, and recurs every twenty-eight days, as the rule.

While this is going on normally the body begins to develop, and attains full perfection. The mammæ increase, the pelvis enlarges, and together the organs of reproduction become functionally mature. This function continues for about thirty-two years, the periodical flow returning regularly, unless interrupted by pregnancy, until near the forty-second year, when it becomes irregular, and after two or three years finally ceases.

After the establishment of menstruation and ovulation, the general health, under propitious circumstances, is much improved, and strength and physical beauty follow; but, if circumstances prove unfavorable, the reverse is the case, for, instead of strength and physical beauty, there is weakness and an undeveloped body; the nervous system becomes deranged, and pronounced disease of the spinal and ganglionic centres supervene.

Amenorrhea, dysmenorrhea, and hysteria, violent cephalalgia, obscuration of the mental faculties, perversions of the moral instinct come on, and frequently take firm hold upon the system.

The phenomena of the menopause present corresponding features to those of puberty. As at the establishment of ovulation, so also at the beginning of cessation, when the ovaries are undergoing a process of involution, and for two or three years after the flow ceases, the epoch is accompanied by infirmities and minor perversions of nervous sensation.

Under such circumstances, the final adjustment and co-ordination of the various organs of the system are happily attained, immunity from the perils and suffering incident to an active state of child-bearing is secured, and a new era of increased strength and pronounced reinvigoration of the whole economy is obtained.

But this happy consummation does not always result, for, like puberty, the change of life may not follow a favorable course, for it is then that such seeds of disease and vices of constitution as have been held in abeyance by the stimulating influence of ovulation and the sexual organs upon the system, are developed, acquire activity, and often speedily become fatal.

The critical nature of this epoch has not always been recognized; indeed, some few have denied it altogether. This is especially true of Tissot, Soucerotte, Meissner, and Dewees, who have expressed such opinions, and Dr. Dewees in particular, who remarks, in his work upon diseases of women, that the idea some people have that this period is a dangerous one, is nothing but a vulgar error, and contemptuously dismisses the subject with a page or two.

Within a comparatively short time, however, other observers have directed attention to this epoch, and by their labors have done much to prove its great importance as a critical and dangerous event, and to show the mistakes and misconceptions existing in respect to it.

Among those who have thus contributed to our knowledge may be mentioned, Fothergill, Sir C. M. Clark, Meigs, Tilt, and G. Bedford. Its importance as a highly critical event has also been recognized by Lisfranc, Moreau de la Sarthe, Brierro de Boismont, and Dr. Dusourd, who have placed their testimony on record in no equivocal terms. That this period is at least of equal importance with that of puberty, as a crisis, can no longer be denied, since it has been proved, by accumulated experience, to determine, with perhaps more decision, complaints of the previous stage of life, or to develop new ones during its progress.

The number of deaths from diseases incident to the menopause may be but few in the experience of any single observer, but the aggregate is certainly great, and there are good grounds for believing this result to be of common occurrence. The following from Dr. Meigs expresses the same thought: "In America," he says, "too little attention is paid to the dangers of the crisis (menopause); and when the threatening consequences of mismanagement or misapprehension have become startling, those fatal mutations are attributed to some trivial cause, and the victim passes away to the sound of the passing bell, and no increase of knowledge acquired by such a mournful experience stands in the way of the next victim to a management as unwise as thoughtless." There is no question but that the prevailing feeling in the profession is that of uncertainty respecting the processes included in this epoch; it is regarded as a period critical, and perhaps dangerous, but not of sufficient consequence to demand *active* interference. By some it is believed that the vis medicatrix naturæ is all-sufficient and all-potent, and that the ills which occur must remedy themselves or else be accepted as incurable. It is a sort of *terra-incognita*, about which little is positively known, and about which much indifference exists.

"It is not unusual with women," says Sir C. M. Clark, "to refer their extraordinary sensations to the change of life, and to consider that when they have thus accounted for their diseases they at the same time cured them; and in this most medical men, judging at least from their practice, seem to be of the same opinion."

This indifference and consequent neglect of duty in the premises has been forcibly commented upon also by

Dr. Meigs as follows: "The complaints which women, at the change of life, often make, are frequently hushed by the unsatisfactory reply that such complaints are owing to the change of life and are likely to cease whenever the change shall become complete. A physician has no moral right by his opinion to put to sleep the anxieties of his patient, and to save himself the trouble of thinking by so concise and unphilosophical a mode of proceeding. Whenever, therefore, a female at this period, which is universally admitted to be a critical and dangerous time for her, comes to complain of symptoms referable to some morbid condition of the reproductive tissues, it is clearly our duty to give considerable attention to her case and not dismiss her until our judgment should be fully satisfied as to the therapeutical and hygienical indications of the case."

This state of general *indifference* to the dangers of the menopause is due to several causes, the most prominent of which are incorrect deductions from mortality statistics, and an extravagant confidence in its remedial and curative influence. In regard to mortality statistics, it has been argued by Benoiston de Chateauneuf and Odier de Genève, that more men die between the ages of forty and fifty than women. This cannot be denied, for the statement made from French statistics has been confirmed by the statistics of other countries; still the deduction made is wholly incorrect, as it has been shown with equal truth that more males than females die at all ages, and that this is not specially the case between the fortieth and fiftieth years; indeed I believe that a careful analysis of statistics of mortality among women, at different ages, will show that, after deducting puerperal and accidental causes in the earlier years, the percentage of deaths between forty and fifty is greatest.

It is a familiar saying that there are no errors or false impressions so hard to correct or eradicate as those that have for a basis a small amount of truth, and the axiom applies with force to the arguments of the above-mentioned writers, as well as to the other cause of indifference, viz. that of extravagant confidence in the curative influence of this epoch.

Instructive as it may be to point out in detail how much of truth there is as a basis for that impression, the limits of this paper will not admit of more than a consideration of a few points in that direction, upon which are founded certain suggestions, as to the treatment of local diseases during the menopause. There is no doubt but that a certain class of pre-existing diseases of the reproductive organs are more or less benefited and frequently cured at that time, but the number is very much less than has been believed, judging at least from statements made in generally accepted systematic works upon diseases of women.

The diseases which have been commonly supposed to be thus influenced may be enumerated as follows: Subacute and chronic ovaritis, ovarian congestion and hypertrophy, ovarian, uterine, and mammary tumors, pelvic peritonitis and cellulitis, areolar hyperplasia, uterine displacements, subinvolution, procidentia, inversion, cervical and corporeal endometritis, polypi, fungous degenerations, ulceration and eversion of the cervix, and vaginal prolapsus. Truly a comprehensive list. Diseases of other organs are likewise supposed to be cured at this time, but their consideration cannot now be undertaken. It may be mentioned *en passant*, however, that of this class insanity, epilepsy, and puerperal mania are most deserving of such confidence.

In the varieties of local disease embraced in the foregoing list, there seems convincing evidence of the benign influence of the menopause, if it be accepted without question; but, if this were done, it would soon become apparent that there are many exceptions in almost every case, and some upon which the influence is positively harmful. The percentage of exceptions cannot be approximated in figures, but an idea at least of their probable frequency may be formed from the statement of Dr. Saussier de Troyes, who declares that he found eleven women from forty to fifty, out of one hundred and two deviations, suffering from this disease. Of course, this exhibit must be accepted for what it is worth, but that there is some truth in it I am convinced from my own observation.

Perhaps a more correct idea may be gained of the influences operating unfavorably upon local diseases, by a consideration of the morbid conditions of the system, which then generally supervene to a greater or less degree.

These general pathological conditions are characteristic, and have been termed "morbid exaggerations of the natural phenomena of the epoch." A minor degree of disturbance of the various functions of the body is usually present, even in such cases as pursue a progressively physiological course; but this may become greatly exaggerated, and so excessive as to constitute grave disease and end in death. The different phases of this disturbance may be classified into diseases of the ganglionic nervous system, diseases of the cerebro-spinal system, and diseases of the gastro-intestinal system.

Those who have seen and studied specially diseases of the ganglionic and cerebro-spinal systems, it is not necessary to refer to statistics to prove their frequency in an exaggerated form at this particular period; indeed, they constitute the most prominent of the constitutional phenomena. Of such manifestations are hysteria, leipothymia, intense and prolonged debility, chlorosis, plethora, nervous irritability, insanity, epilepsy, intense cephalalgia, and perversions of the moral instincts, not the least of which are suicidal and homicidal mania. Other manifestations, as long-continued nausea and vomiting, diarrhœa, biliousness, dyspepsia, and hemorrhoids, and certain derangements of the functions of the heart, lungs, and kidneys, are also very frequent.

At all times of life these diseases are evidences of a lowered state of vitality, and when they occur during the menopause this is specially the case, and when they become pronounced, and occasion great constitutional disturbance, it is, to a certain extent, due to inherited predisposition, or acquired dyscrasias, but *chiefly* to the reacting influence of diseases of the reproductive tissues. This I conceive to be a correct view of the general influences supervening at the menopause.

The *local* diseases which are harmfully influenced under such circumstances are uterine and mammary cancer, ovarian, mammary, and uterine tumors, uterine polypi, fungous degeneration of the tissues of the womb, and different varieties of disease of the cervix. Other diseases might with propriety be added to those just mentioned, but these will be sufficient, I take it, for the purpose here in view.

Cancer has been proved to be particularly fatal at the menopause. The following comparative statement as published will show this to be true. "The cancerous age" in England has been demonstrated to be from forty to fifty, in the Registrar-General's report, as between women and men, as follows:

From 30 to 40, as 19 women to 6 men.
" 40 to 50, as 51 " to 6 "
" 50 to 60, as 5 " to 1 man.

Cases collected by Scanzoni, Kiwisch, Leibert, and West, show about the same results. Indeed, it may be said that, no matter where situated, cancer is most frequently fatal between forty and fifty.

Ovarian tumors may originate at this period, but generally do so some years earlier, when the ovaries are functionally active. A table by Leibert shows that in 59 cases this disease originated 12 times between 30 and 40, and 13 times between 40 and 50. It also appears from the Registrar-General's report, that out of 44 cases occurring in the city of London in 1848, 17 deaths took place between the fortieth and fiftieth years, and that in 1,205 deaths since that time from ovarian disease, 362 took place between these years.

From this it will be seen that in a certain proportion of cases the disease may then first originate, and in others may then terminate fatally.

Uterine tumors are generally supposed to be favorably influenced or remain harmless at this time, but it is not unusual, to the contrary, for them to take on increased activity, and become fatal.

Fibroid tumors are of very common occurrence at all ages up to the sixtieth year, but they most frequently give trouble between the fortieth and fiftieth years.

The influence of age in exciting active growth in these tumors may be estimated from the succeeding figures tabulated from 133 cases collected by Chiari and West, to which Schroeder has added 36 of his own, in reference to the time they applied for treatment:

Ages.....	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80
Cases.....	33	54	62	19	0	1

There is no question but that many women who have fibrous tumors of the uterus pass through this period without inconvenience, and are not troubled with them in after-life, still it is equally true that they are not unfrequently a cause of suffering and death, for this has also been shown by Chiari, Malgaigne, Brun, Paget, and West.

Mammary tumors also often take on activity and become malignant at this time. Unilocular cysts have been found by Mr. Erichsen most frequent from forty-five to fifty, and Velpeau has shown hypertrophy, cysts, nodosities, and adenoid enlargements in these parts most common at these years.

Dupuytren's experience, tabulated from fifty-seven cases of uterine polypi, shows that while this disease is frequent from thirty to forty, it is more so between forty and forty-nine. Fungous degeneration of the mucous membrane of the uterus is frequent at this period, and is unfavorably influenced by it.

Certain diseased conditions of the cervix—such as erosions, ulcerations, hypertrophy, and eversions—often take on renewed activity, and give much trouble. Hard hypertrophy is often met with at this period, and I have often found that condition present in patients I have examined, and have no doubt but it often is the exciting cause of certain ganglionic manifestations, one of which is long-continued nausea and vomiting. With regard to eversions, I cannot speak positively as yet, but in some cases I have recently observed there was a suspicious degree of hardness, which, together with certain other general symptoms, excited fears of malignancy.

The question as to whether the menopause ever gives origin to cancer, or whether it only gives fatal activity to such disease previously undetected, is still unsettled, but it does not appear unlikely that it often is then first originated, because, as stated by Dr. Tilt, if the average duration of cancer is *sixteen months*, and the average duration of the first part of the menopause is *three years*, the relation between the two as to cause and effect must be something *more* than a mere matter of chance. It is quite likely, however, that many cases reported as cancer have been malignant disease, without being specifically cancerous, for the tendency of this epoch to develop malignant characters in diseases previously benign has not, it seems to me, received the attention it deserves.

The word malignant is here used to mean such conditions of disease as are destructive of life. Perhaps this will be better understood from the definition of Dr. M. H. Collis, who says: "If a tumor is destructive of life or tissue, it is malignant; if not, it is innocent or benign. Many cancers are not malignant. Many non-cancerous growths are eminently destructive of life."

Attention has been called to the influence of inherited constitutional vices and acquired dyscrasias in developing malignant diseases in innocent growths, and Prof. Esmarch has recently detailed several instances illustrative of the development of cancer from benignant growths, and is convinced that a predisposition to malignant new growths is given in hereditary scrofulous and syphilitic dyscrasias.

Certain diseases of the reproductive organs, usually innocent or benign, may therefore assume malignant characters—not only from vices of constitution, but from a *lowered state of vitality* in the system, due to "morbid exaggerations of the natural phenomena of the epoch."

These diseases may destroy life in various ways—by rapidly increasing in volume, by encroachment upon vital organs, by degeneration of immediate and adjacent structure, by exciting inflammation, by causing exhausting discharges, prolonged or excessive hemorrhage, and by inducing septic poisoning of the blood.

These are frequent causes of death at the menopause, and may be justly termed malignant.

Ovarian tumors have been shown to be frequently fatal at this period, having become malignant from encroachment and exhaustion.

Uterine tumors not unfrequently become fatal also—not, as has been contended by some, because they become cancerous, but by reason of rapid growth, degeneration of tissue, and exhausting hemorrhages. Uterine polypi and fungous degenerations are sometimes fatal, are always a fertile source of mischief, and greatly complicate the progress of the epoch.

Mammary tumors are especially liable to take on malignant characters, and become fatal in the same general way.

The tendency therefore of the menopause is manifestly to a state of exhaustion, and it certainly seems contrary to good judgment and medical intelligence to maintain, that the system while in a state of weakness, nervous depression, and lowered vitality generally, is in a condition best calculated by its unaided powers to throw off pre-existing diseases, or withstand the attacks and inroads of new ones. Nor, indeed, should it be a matter of surprise to find the reproductive organs so often the seat of malignant disease, when it is remembered how usual it is for them to be burdened with structural diseases and adventitious growths, which have remained unrecognized perhaps for years.

(To be continued.)

HYPODERMICS OF COFFEE FOR MORPHIA VOMITINGS AND OPIUM POISONING.

By MONTROSE A. PALLEN, M.D.,

NEW YORK.

Case I.—Mrs. B., ætat. 34, has been under treatment for three months for chronic pelvic cellulitis. The entire left half of the periuterine spaces, as well as the Douglas cul-de-sac, are matted together, rendering the uterus, left broad ligament, and rectum, fixed and immovable. Her menstrual molimen has been ushered in for some eight months with excruciating pains, lasting from three to four days, subsiding into a dull hypogastric and pelvic ache during the menstrual flow. Nothing has relieved these pains save the complete influence of morphia; but as soon as the drug begins to subdue the pain, vomitings ensue, persisting as long as any morphia remains in the system. So painful and so prostrating are these attacks, that the patient has lately made strenuous efforts to do away with the medicine, and consents to its use only when her agonies are unbearable. On the sixteenth of November last, I insisted upon giving a hypodermic of one-fourth grain of morphia sulphate, combined with one-fiftieth grain of atropia sulphate, hoping the latter drug might, in a measure, mitigate (as I have frequently found it so to do) the nausea and vomiting. It was of no avail, as in less than twenty minutes the usual miserable and distressing attacks came on. The continuous and faradic currents were alternately tried for more than an hour. It was folly to attempt stimulation, as the smallest pieces of ice were instantaneously rejected from the stomach. The patient was seriously prostrated, and I felt somewhat anxious about the result, as she was extremely weak and debilitated. After a period of four hours I bethought me of a preparation of the *fluid extract of Java coffee*, which had been sent me by John Wyeth & Bro., of Philadelphia. Of this coffee extract I gave a *warm* hypodermic of twenty minims in the epigastrium, and in about fifteen minutes the patient expressed herself as feeling decidedly better, having vomited but once during that time. I then gave an additional hypodermic of fifteen minims (warm) in the abdominal parietes. She was free from the nausea in less than an hour, and never vomited after the second injection of coffee.

Case II.—I. I., a confirmed secret morphine eater, was found in his bed on the morning of December 1st, profoundly affected. His pupils were very much contracted, conjunctivæ injected, pulse 42 per minute, respirations feeble, 8 to the minute, and was aroused with great difficulty, after being well slapped on the cheeks and drenched with cold water. An empty drachm-bottle, marked "Morphiæ Sulph.," was found on the floor. I injected *thirty minims* of coffee in the epigastrium at once, and ordered him to be walked about by two stout hotel-porters. In fifteen minutes I administered *thirty* minims more in the right arm, over the deltoid. I watched him for about half an hour more, when I observed the pupils to be dilated, and the pulse had gone up to 64, and the respirations were about 14 per minute. In two hours more he showed no farther symptoms of morphine whatever.

In the first case there were no ill effects from the hypodermics; but in the second one, a very considerable abscess ensued in the shoulder, and some inflammatory indurations in the epigastrium. A very pertinent question arises, if the hypodermics of *cold* coffee-extract were prejudicial to the sub-integumentary connective tissue, or did the quantity (thirty minims) produce abscess. Where the fluid was used *warm*, about the temperature of the body, no trouble manifested itself. For quite a number of years I have been in the habit of warming all hypodermics, and I have never seen abscess follow; whereas (from hurry or impossibility to warm the fluid), I have not infrequently seen cold hypodermics produce irritation, inflammation, or abscess.

Another very interesting question arises as to the antidotal influence of coffee. I ordered the fluid extract of coffee from Wyeth & Bro. to use as an eliminator of the urates in gout. It certainly possesses valuable properties, in the treatment of chronic gout, as a renal depurant. Can it act thus to remove the poison of opium and the tissue detritus caused therefrom? I leave the solution of this question to our physiological chemists.

9 West Twenty-ninth Street, Dec. 16th.

Reports of Hospitals.

ST. THOMAS'S HOSPITAL, LONDON.

LATENT SCARLATINA.

(Reported by C. Clifford Mercer, M.D.)

Dr. Murchison believes that there is nothing more easy than to diagnosticate a typical case of scarlatina. It has four special symptoms, viz.: 1, sudden onset of pyrexia, the temperature frequently going up within twenty-four hours to 104° F.; 2, a sore throat with swelling of the glands of the neck; 3, clearing off of a coated tongue at the end of about three days, leaving the surface clean and the papillæ enlarged and strawberry-like; 4, a peculiar punctated rash appearing thirty-six and sometimes as early as twenty-four hours after the onset of the fever. The rash is an erythematous flush disappearing on pressure. In the flush are to be seen, upon looking closely, little spots which are darker and slightly raised.

On the other hand, there is probably no error in diagnosis more common than that of failing to recognize latent scarlatina. There are undoubtedly cases of scarlatina in which none of the above symptoms occur, or, if they occur, they are too slight to be noticed. These cases are not brought to the physician. The cases of latent scarlatina most often seen by the physician are those which complain only of sore throat. The importance of recognizing these latent cases is great, because the patient may soon be in danger from the sequela of Bright's disease of the kidney; and, if proper precautions are not taken, other members of the family, playmates, or school-fellows will be exposed.

As the period of incubation is sometimes as short as twenty-four hours, it is quite necessary to thoroughly investigate every seemingly simple sore throat. Inquire for vomiting—which, bear in mind, may also occur in diphtheria, but is not met with in simple quinsy. See if the glands of the neck are enlarged, not being deceived by enlargements of long standing or the smaller enlargements of quinsy. Examine the throat, which, in scarlatina, presents a redness differing from that of any other sore throat, but a difference only to be

recognized by an experienced physician who has examined many throats suffering in various ways. Examine the tongue; if only a few papillæ on the tip are enlarged, it is a significant fact. Look for great drowsiness during the first twenty-four hours, not mistaking it for the stupor which is sometimes seen later on in quinsy, when both tonsils are enormously swollen and perhaps suppurating. The odor of the breath is almost or quite pathognomonic to the physician of sufficient experience. Albuminuria is sometimes present as early as the second or third day; therefore urinary tests are to begin as soon as the patient is seen. After the subsidence of the sore throat, some desquamation may take place, or transverse lines appear on the nails. Ask carefully about any chances of exposure, not forgetting that parents often have a wish to cover up a suspected exposure, because they do not like the idea of the child having scarlet fever, and think the doctor ought to be able to tell, without their help, whether the child really has or has not the dreaded disease. This is all wrong; the fact of exposure is of the greatest importance. If the child has not been exposed to typical scarlatina, find out if it has been with children having a similar sore throat. Only in the absence of all the above diagnostic points can a case of slight sore throat be considered simple quinsy. Further, in a case of simple quinsy—there may have been previous attacks—as a rule, one tonsil is first affected, and, as it recovers, the other is affected, and the glands frequently suppurate: three facts not true in scarlatina.

The case which called forth these remarks was a little girl recently admitted to the hospital. She had a sore throat, a temperature of 104° F., and enlarged glands in the neck. In private practice, a suspected case can be isolated, whatever be its true nature. But in the hospital it is another matter; it is necessary to make a correct diagnosis: for if the child has scarlatina and is put in a common ward, all the children in the ward are exposed; while, if it has not scarlatina, and is put into the scarlatina ward, the child is wrongfully exposed. When it was ascertained that the girl's sister had been admitted to the hospital with a similar sore throat, the diagnosis was confirmed. The diagnosis was still more certain when it was learned that another child, living in the street in which the sisters lived, and who had played with them, had presented herself with a similar sore throat. The child was put into the scarlatina ward. On the third day after admission her urine was smoky, contained albumen, blood-corpuscles, and epithelial casts. [Subsequently, after delivery of the lecture, the sister, in about third week of her illness, got copious albuminuria.]

Progress of Medical Science.

Cæsarean Section in a Dwarf.—An interesting case of Cæsarean section is reported by Mr. Wrench, of Baslow, Derbyshire. The mother, though twenty-eight years of age, was not larger than many girls of ten, but was free from deformity. The child was lying with its long axis at right angles to its mother's spine; the vicinity of the chest and pelvis having necessitated the expansion of the uterus directly forward, so that it was lying almost entirely anterior to a line drawn from the ensiform cartilage to the pubes, and projected in a most unusual cone, of which the umbilicus was the summit. The pelvis was so small, that it was quite impossible to introduce the hand, and it was evident that delivery *per vias naturales* would be impossible without evisceration, and that even then it would be attended with almost insurmountable difficulty and risk. The Cæsarean operation was therefore determined upon, and performed after she had been in labor about thirty-three hours. An incision eight inches in length was made in the median line, four inches above and four inches below the umbilicus. The abdominal walls and uterus were no thicker than cartridge-paper, and the placenta, extending about an inch across the median line, was cut through before being recognized. The child was speedily removed, and, after the uterus began to contract firmly, the placenta came away without any very serious hemorrhage. No sutures were put into the uterus, but the external wound was closed by eight deep sutures of iron wire, adhesive strips, and bandages. These sutures were cut out and the wound granulated, but the patient did well in spite of an attack of phlegmatia dolens in the left leg. On the thirty-second day after the operation the menses were flowing freely, both from wound and vagina. After this she continued to improve, and on the anniversary of the operation she continued well. Her courses are regular every month, and she notices a few drops of colored discharge from the abdominal cicatrix at each period. The child is alive, and is very large for his age; the father was a large man.—*The Lancet*, July 6, 1878.

Congenital Phimosis as a Cause of Rupture.—Straining from difficulty of micturition has been mentioned by most authors as a cause of rupture in the adult, but none have made any allusion to congenital phimosis as a cause of infantile hernia, with the exception of Mr. Owen, who says that in such cases it would be well to look to the size of the urethral and preputial orifices. Noticing the great frequency with which infantile hernia occurred with this congenital condition, Mr. Kempe, of the Children's Hospital, London, analyzed fifty consecutive cases (not selected ones) of phimosis, and found thirty-one complicated by inguinal hernia; in many there was also umbilical hernia, but where this form *alone* existed it was not counted. In none of these cases was the rupture noticed at birth; the earliest appeared three weeks and the latest two and a half years after. Circumcision was performed in all these cases; in five the hernia never reappeared, and all have been greatly benefited. The abdominal parietes being naturally weak in children, it is easy to imagine the straining to overcome the obstruction to micturition offered by phimosis, and the crying consequent upon the pain caused by the straining, as exciting causes of rupture. —*The Lancet*, July 27, 1878.

On Murmurs in the Peripheral Arteries.—Prof. Senator reports two cases in which murmurs were heard over peripheral arteries, although there was no aortic insufficiency in either case. The first was one of splenic anæmia (pseudo-anæmia); a distinct murmur, coincident with the dilatation of the artery, was heard over femoral, brachial, and radial arteries, and in the palm of the hand, while a distinct capillary pulse was visible in the finger-nails. The murmur was heard even when every precaution was taken to avoid pressure with the stethoscope. The retinal arteries presented distinct pulsation if slight pressure were made on the eyeball, but not otherwise. In the second case—one of extreme anæmia, due to repeated intestinal hemorrhages, probably dependent on hæmophilia—a murmur was heard in all the accessible peri-

pheral arteries, and a capillary pulse was visible, but the retinal arteries did not pulsate.

Prof. Senator agrees with other writers in ascribing the murmurs to the vibrations of the arterial walls, their intensity as well as their existence depending on the extent and rapidity of these vibrations. He mentions the possibility of mistaking the murmur produced by the vibrations of the air in the interior of the hollow stethoscopes that are in common use for a faint arterial murmur, but states that this possibility of error can be eliminated by the use of Niemeyer's solid stethoscope. The conditions which favor the development of arterial murmurs are the same as those which augment the force of the apex beat of the heart, viz., increase in the power of the contraction of the cardiac muscle and diminished tension of the arterial walls. When the heart contracts more powerfully, all other things being equal, not only is the apex beat stronger, but the pulsatory distention of the arterial walls is greater; and the same is true of both when the obstacles to the column of blood passing from the heart and into the arteries are diminished, as is the case when the arterial tension is abnormally slight. The most favorable conditions for the development of the arterial murmurs are of course given when both these factors act together. Hence it is easy to determine the pathological conditions in which the arterial murmurs are to be looked for. They are, first of all, aortic insufficiency with dilatation and hypertrophy of the left ventricle; next, cases of pure insufficiency of the mitral valve, in which the left as well as the right ventricle is hypertrophied, because the former then discharges its contents in two directions, hence meets with abnormally slight opposition, the tension of the arteries being on that very account diminished; then, perhaps, pure cases of persisting potency of the ductus Botalli; finally, other conditions in which the arterial system is relaxed, while the heart acts powerfully, such as anæmia, chlorosis, fever, and perhaps also, stenosis of the aortic or mitral valve, with marked hypertrophy of the left side of the heart.—*Berl. klin. Wochen.*, 1878, No. 21.

Amyloid Degeneration of the Kidneys.—Despite the numerous and great variations in the quantity and chemical constitution of the urine in cases of amyloid degeneration of the kidneys, some degree of albuminuria has been universally regarded as a constant and characteristic symptom of that affection. With regard, however, to the modus of the excretion of albumen by the degenerated kidneys, opinions have differed greatly; some holding that the walls of the diseased vessels are abnormally permeable to albumen; others that it escapes from the healthy vessels in consequence of the increased blood-pressure due to the collateral hyperæmia; and still others that it is the coincident chronic parenchymatous nephritis, and not the amyloid change of the vessels, which leads to the albuminuria. Some light is thrown on this question by four cases recently reported by Dr. Litten, of Berlin, which at the same time demonstrate the incorrectness of the opinion that albuminuria is an invariable symptom of amyloid renal disease. In all four cases the diagnosis of amyloid disease of some of the abdominal organs was made *intra vitam;* and in all, consequently, the urine was carefully examined every day for evidence of implication of the kidneys. The result, however, was invariably negative, neither albuminuria nor casts being found on any occasion. One case was under observation three months; two, thirteen and fourteen days respectively; while in the fourth the length of time during which the urine was examined for albumen is not definitely stated. In all four cases the autopsy revealed unmistakable signs of more or less advanced waxy disease of the kidneys. The parts affected were the glomeruli and the small vessels of the cortex and medulla. In the first case the condition observed was a peculiar one: all the glomeruli affected were completely and totally diseased, there being no intermediate steps between the perfectly healthy and the totally degenerated glomeruli. The latter, moreover, were entirely impermeable to the injection fluid with which one kidney was injected, while the former were beautifully injected. In the other three cases the affected glomeruli were not totally degenerated, only a varying number of tufts in each having undergone change. One noticeable feature in all of the four cases was the complete absence of all signs of the inflammatory affection which almost constantly accompanies waxy degeneration. The only parenchymatous change consisted in a slight and unimportant fatty alteration of the epithelium in a few of the tubes.

Dr. Litten submits that these cases furnish strong ground for questioning the widely accepted opinion that amyloid degeneration of the walls of blood-vessels renders them abnormally permeable to the serum-albumen of the blood. On the other hand, they lend a certain air of probability to the theory that the albuminuria in amyloid disease of the kidneys is due to the parenchymatous inflammation of the organ, and not to the waxy degeneration of its vessels. The fatty condition of the epithelium, noticed in three of the cases, seems to be of no importance in connection with the question of the excretion of albumen, as is evident from the fact that it is a normal condition in cats and dogs, and occurs also in cases of phosphorus poisoning.—*Berliner klin. Wochen.*, No. 22, 1878.

Does Pilocarpine Possess the Power to Excite Uterine Pains.—As a contribution to the material from which this question must be decided, Dr. Welpower, of Vienna, reports the following case: A primipara, with a slightly deformed pelvis, was delivered with forceps after a severe labor, in October, 1876. The child did not breathe for a long time, and died on the following day of atelectasis. On May 16, 1878, she being then, as nearly as could be determined, about the middle of the ninth month of her second pregnancy, it was decided to bring on premature labor, and, at the same time, as the case was in all respects an appropriate one, to make a trial of the alleged ecbolic powers of pilocarpine. Accordingly, in the course of eight days, seven hypodermic injections of a two per cent. solution of the muriate of pilocarpine were administered; but, although the characteristic physiological effects of the drug appeared after each injection, the cervix uteri remained unaffected. The two last injections caused repeated and exhausting vomiting, which necessitated the discontinuance of the experiment. Labor was then brought on by puncture of the membranes, and a dead child was extracted with the forceps. The puerperal period passed off without any unusual symptoms.—*Centralblatt für Gynäkologie*, July 20th.

Formula for Paresi's Hæmostatic Collodion.—

Officinal collodion	100.00	gmm.
Carbolic acid (pure)	10.00	"
Tannic acid	5.00	"
Benzoic acid	3.00	"

M. secund. art.. —*L'Union Médicale.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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SANITARY REFORM IN OUR PUBLIC SCHOOLS.

THE recent articles on school hygiene in the *New York Herald* are calculated to do much good in calling the attention of the public to this important subject. Notwithstanding all that has been said concerning the necessity for reform and the means which have been tried to bring about such a result, the schools are, from a sanitary point of view, very little if any improved. Strange to say, where the most substantial aid should have been expected in efforts to benefit the school children, the strongest opposition has been encountered. The Board of Education has, directly and indirectly, thrown every obstacle in the way of placing the schools on a better sanitary footing, and, in fact, appears to be actuated by a zeal in the matter which cannot, on general principles, be explained. It not only refuses to do anything itself, but positively hinders the efforts of every one else. And yet this is the kind of government to which the sanitary welfare of one hundred thousand school children is entrusted.

So much has been said on the necessity of improving the sanitary condition of the schools, and of caring for the hygienic interests of the school children, that it appears almost like useless reiteration to refer to the subject again. But we are more and more impressed with the fact that continual agitation of the question is beginning to bear fruit. The Medico-Legal Society of this city has investigated the subject on its own account, and, as a result, has taken a decided stand in favor of a radical change in the present school management. Through its instrumentality valuable suggestions have been offered, urgent appeals have been made for medical representation on the school board, and, lastly, laws have been framed to meet the emergencies of the hour.

The subject has been discussed in the Legislature, the daily press has used its powerful influence in the right direction, devoting column after column to the exposure of the unsanitary condition of the school-houses; in fact, the tide of opinion outside of the educational board seems to be only in one direction. All that appears to be necessary is to change the opinion of the board in question—a change which does not seem to be possible unless the board itself is replaced. This is, of course, not to be expected under its present political management. What may be done by the new mayor remains to be seen.

It will be recollected that during the last Legislature a bill was passed limiting the minimum age of attendance of school children to five years. This appeared well enough upon its face, but the *Herald* very significantly asks whose business it is to see that the law is enforced. The Board of Education has certainly not acted in the matter, as the majority of the teachers have not even been informed of the existence of such a law. The consequence is that children under the specified age are admitted almost without question, and certainly without any active interference. The class-rooms are as crowded as ever, contagious diseases are freely propagated, inspections of the proper officials are so few and far between as to amount to nothing, and the Principals draw their salaries in proportion to the average attendance of pupils. When we consider, in the face of these facts, that the Board of Education is the opposing influence to the reforms which are necessary, is there not occasion for congratulation that the *Herald* has turned the influence of its powerful advocacy in the right direction, and is leading public opinion in the direction of demanding what it has heretofore merely solicited. The Board of Education says that the sanitary condition of the schools is perfect. But what a terrible responsibility it assumes in so doing is best realized by those who are practically acquainted with the state of affairs, more especially in the primary departments of the schools in question.

A NEW PHASE OF THE HOMŒOPATHIC QUESTION.

AT the recent annual meeting of the Homœopathic Medical Society of the County of New York, there was a fresh struggle between the liberals and exclusives. The occasion was a proposed amendment to the constitution of their Society. The change sought was the removal of the clause which virtually binds its members to an exclusively homœopathic practice, and declares to the world that such is the practice of its members. It being generally admitted, however, that the great majority do not confine themselves thus strictly, an effort was made by some of the more intelligent and we may say honest members, to, by public declaration, place the matter in its true light before the profession and the public. This effort was defeated. The present position of affairs, therefore, seems to be that the Society in question contains two sorts of members: those who desire emancipation from the thraldom of dogma, and the acknowledged right to

practise as their judgments dictate; and second, those who practically do the same, but are not willing that the public should know it. The position of these gentlemen is too obvious to require lengthy comment. It is simply an example of the apparent dishonesty and fraud which we have, perhaps, too universally charged against homœopaths in general. There is, indeed, a third class, very small in numbers, who apparently do believe that pure homœopathy is all-sufficient in the treatment of disease, and who consistently confine themselves to it in practice; who would perhaps permit a patient to bleed to death while taking infinitesimal doses of phosphorus, rather than apply styptics or other direct means for checking the hemorrhage. These gentlemen, joined to their idols, we must relegate to the care of the psychologist.

The position, however, of the so-called liberal homœopaths—those who believe that many drugs can be usefully applied according to homœopathic principles as formulated in the proposition "*Similia*," etc., but who do not regard this principle as always available—in the present aspect of affairs, must be somewhat embarrassing. If they remain members of their County Society, they are virtually *participentes criminis* of false pretences. If they resign, they in a measure lose the political (medical) rights which they now enjoy, and with no assurance that they can acquire new ones. The question, then, seems to become one of principle *vs.* expediency. Which will probably yield the most satisfactory results in the end we leave them to determine. Foreseeing the inevitable, however, they have prepared a refuge by the organization, we are informed, of a non-partisan incorporated association called the "New York Medico-Chirurgical Society," from the constitution of which all reference to dogma or belief or special methods of practice has been omitted. Here they can consistently live up to their declarations, that they are, and desire to be called, simply physicians, and devote themselves to the cultivation of all branches of medical science.

CHARACTERISTICS OF THE YELLOW FEVER IN THE LATE EPIDEMIC.

THE results of the study of the yellow fever cases in the recent epidemic are beginning to come in, and they give us many facts of interest. Every epidemic has, of course, some clinical features of its own, and those of the last one have been carefully observed. A very excellent account of the seventy cases admitted to the Yellow-Fever Hospital at Louisville, Ky., has been given by Dr. Marvin, House-Physician there during the time of the epidemic.

He found that there were two classes of cases: one in which the temperature ranged from 100° to 106°, with a hot, dry skin; and a second, where the temperature ranged between 97° and 100°, with a cold, clammy, and much yellower skin. The latter variety was more fatal.

The symptoms were in the main like those of former epidemics, but a number of interesting characteristics were noted.

The pulse was always so irregular as to be of help in the diagnosis. It ranged from thirty-five to one hundred and forty beats a minute. It bore no relation to the temperature. The fever was a continued one. It had remissions, but not intermissions. The fauces were red and swollen; the tongue, eventually, dry and cracked, unlike the flabby and enlarged tongue of malarial fever. From the skin there exhaled the peculiar rotten-hay odor always noticed. Herpetic eruptions about the mouth and nose were frequent.

The urine had at first a high specific gravity, falling as the disease progressed. It was small in amount at first also, and suppression with uræmia was always to be looked out for. It generally contained bile, and *always* albumen, the amount, however, varying very much. There were also granular casts. The amount of albumen and casts was in proportion to the severity of the disease, and furnished a valuable aid in prognosis. Vibrios and bacteria were found in the breath and the blood. The proportion of white blood-corpuscles was increased. Black vomit occurred in half the cases, and did not prove so very unfavorable a symptom, as a third of those thus affected got well. There were melænic stools as usual. A hemorrhagic tendency was constant, but was easily controlled by a spray of Monsel's solution. The blood oozed from the mouth, eyes, nose, ears, etc.

Just before death, the temperature generally fell to 97°. After death it gradually rose, sometimes to 106¼° in the axilla, the body remaining warm for twelve hours.

The average duration of the disease was four days.

Very careful post-mortem examinations were made, the kidneys and liver giving the most uniform lesions. The stomach showed no erosions, congestion, or catarrh. The hemorrhages from it were passive ones. The liver was enlarged and generally of some shade of yellow. The microscope showed more or less fatty infiltration and fatty degeneration, with occasionally increase of connective tissue.

The kidneys always showed under the microscope the tubules choked with finely granular *débris* and epithelium, or in other places empty and denuded of epithelium. There were no important changes in the other organs.

The treatment consisted in at once exerting the emunctories to action, especially the skin and kidneys. The patient was then kept cinchonized and the various symptoms combated as they arose. The cases brought to the hospital were uniformly bad ones, the disease generally being in the second stage when they were received. The patients had previously suffered from neglect and exposure, and the mortality therefore of thirty one is not considered high.

None of the physicians, attendants, or visitors at

the hospital caught the disease, although no especial pains were taken in the way of protection and disinfection.

Reviews and Notices of Books.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL SOCIETY. Volume II. 650 pages, 12 chromo-lithographs and many other illustrations. Boston: Houghton, Osgood & Co.

THE second volume of the Transactions of the Gynæcological Society makes its annual appearance, and from the variety and extent of the articles which it contains, merits a somewhat detailed notice.

Professor Barker in his address makes a strong plea in favor of greater attention to the *medical* treatment of diseases of women. While gynæcological surgery has made prodigious progress, the *constitutional* and strictly medical treatment of diseases peculiar to females has been too universally neglected, says the President of this Society. He, evidently, is no partisan of the "mechanical treatment" practice, and further says that "the use of pessaries . . . . is neither safe nor useful until all associated pathological conditions, due to antecedent or coincident of inflammation, have been overcome." Undoubtedly this is true as regards any existing pelvic cellulitis or peritonitis, either acute or chronic, strong adhesions of the womb due to the previous existence of the above inflammations, etc., but to await the removal of subacute or chronic uterine inflammations or congestions or their consequences, must certainly discourage the practitioner, to say nothing of the patient. Such practice must certainly be pronounced injudicious, to say the least, since, in the great number of cases, the "pathological conditions" cannot be removed till the dislocated organ has been properly supported. It is the every-day experience of the "mechanical" practitioners to quickly relieve their patients, in many cases to ultimately cure them, by the immediate use of pessaries, after the patients have been long and *ad nauseam* under local antiphlogistic and tonic, without neglect, either, of constitutional treatment. As Dr. B. urges, the importance of constitutional and hygienic treatment should not be lost sight of in our eagerness to adopt local measures.

II. The Functions of the Anal Sphincters, so called, with two woodcuts, by Dr. James R. Chadwick, of Boston, Mass., is an interesting and practical paper. His conclusions may be summed up as follows:

1. There is an aggregation of circular muscular fibres at between three and four inches from the *sphincter ani*, encircling the posterior half of the circumference of the rectum, first described by Nélaton and Velpeau. 2. Involuntary in action, their function is that of completing the expulsion of the fæces from the alimentary canal, and they should be called the *Detrusor Fæcium Superior*. 3. This detrusor and the internal sphincter ani (which should be called the *Detrusor Fæcium Inferior*) divide the rectum into three pouches, one situated between the external (true) sphincter ani and the inferior detrusor, another, between the latter and the superior detrusor, which is called the *ampoule rectale*, and a third, the remaining portion of the rectum. 4. To pass the obstructions offered by the two detrusors, the point of the bougie should take the following directions: through the sphincter ani directly backward along the perinæum, meeting the inferior detrusor; it should then be turned forward and upward, then backward through the *ampoule*, afterward forward again to pass the superior detrusor, and, finally, slightly backward and upward through the rest of the rectal cavity. 5. "As the anterior half of the superior detrusor is just below the level of the bottom of Douglas' pouch, it seems probable that the point at which intraperitoneal abscesses are most likely to perforate the rectum is just above this constricting fold." 6. Probably the *detrusor superior* and supra-adjacent parts are the first to appear in cases of *prolapsus recti*.

III. Excision of the Cervix Uteri, its Indications and Methods, with one woodcut, by Dr. John Byrne, of Brooklyn, N. Y., is an article of paramount value and considerable length. The indications for the operation are those found enumerated in Thomas' excellent work. The author decidedly advocates the galvanic cautery as the very best means at our command. He gives full directions for its use, pointing out the necessity for a thorough knowledge of electro-physics in manipulating this powerful agent. Four cases of epithelioma uteri are reported, and in all there had been no return of the disease in 7, 6, 5+, and 2+ years respectively. Two cases of carcinoma uteri are also recorded; in one there was no return of the disease till 2½ years, in the other (encephaloid cancer of the entire uterus and vaginal walls) the symptoms were greatly improved. Finally, a case of simple hypertrophy of the cervix, with procidentia and cystocele, wherein permanent elevation of the organ took place following the operation. Drs. Goodell and Noeggerath supported Dr. Byrne's views, whilst Drs. Jno. Scott, of San Francisco, and Byford held that the operation (excision) should only be performed for epithelioma and carcinoma, the former giving his solemn protest against the use of galvano-cautery instead of the scissors.

IV. Report on the Corpus Luteum, with twelve chromo-lithographic plates, by Dr. John C. Dalton, of New York, is intended to support the ovulation-menstruation theory, although there is one case (xvii., p. 136) reported where menstruation was regular without the rupture of the Graafian follicles, or formation of *corpora lutea*. The article is especially valuable, covers fifty pages, and cannot be well condensed. The plates are very fine.

V. The Pathology and Treatment of Puerperal Eclampsia. By Professor Otto Spiegelberg, of Breslau, Prussia. *True* puerperal eclampsia is, according to the author, dependent upon uræmia. There is a form, without coincident albuminuria, which is strictly *epileptic*. The indications for treatment are: restoration of the renal functions; diminution of arterial pressure; reduction of all irritation of the vaso-motor and spasmodic nerve-centres. In the *true* form, venesection, narcotics, and termination of labor, if it have already commenced, are *the* remedies. Venesection stands first. The induction of premature labor "is not called for, ... is absolutely harmful." Purgatives, diuretics, diaphoretics, as well as tonics, are useful in prophylaxis. In the "epileptiform attacks," chloroform, chloral, and morphia are alone indicated. Although there are conflicting opinions as to the value of venesection, undoubtedly there are cases, and these too uræmic, where it is of inestimable value. The previous history of the patient as to nervous affections (epilepsy, chorea, etc.), the condition of the kidneys at the time, as well as the character of the convulsions, are points of the utmost importance in deciding as to the treatment of individual cases.

VI. Dilatation of the Cervix Uteri for the Arrest of

Uterine Hemorrhage. By Dr. George H. Lyman, of Boston. VII. The Principles of Gynæcological Surgery applied to Obstetric Operations. By Dr. A. J. C. Skene, of Brooklyn, N. Y. VIII. On the Necessity of Caution in the Employment of Chloroform during Labor. By Dr. William T. Lusk, of New York. are papers of practical importance. Dr. Skene advocates the use of the speculum as rendering many obstetrical operations of easier performance. Dr. Lusk concludes: "Deep anæsthesia weakens, in some cases suspends, uterine action. Even small doses of chloroform, during the second stage, may so weaken uterine action as to create the necessity for the use of ergot or the forceps. Parturient women do not enjoy an absolute immunity from the pernicious effects of chloroform. It should never be given in the third stage of labor [eclampsia excepted]. The remote effects of large doses of chloroform during labor require further investigation."

IX. The Present Status of the Intra-Uterine Stem in the Treatment of Flexions of the Uterus. By Dr. Ely Van de Warker, of Syracuse, N. Y. This paper goes to support the opinion that the use of the stem-pessary is much more extended than is generally represented, and that the feeling of insecurity in its use "is traditional, and not the result of accumulated experience." In the discussion which followed, Dr. Thomas opposed the general use of the stem-pessary with both vigor, facts, and argument. Dr. Peaslee admitted his willingness to use it in a few cases of extreme anteflexion only. Dr. Goodell, in spite of his admission that "there are certain stubborn cases of anteflexion, and, for the matter of that, of retroflexion too, which can be satisfactorily treated in no other way than by the stem," confesses he is "on tenterhooks until the first week is passed, and always feels relieved when the stem has been removed for good." Dr. A. H. Smith, of Philadelphia, would temporarily use it, in the *retort* form of retroflexion. Dr. Byford, Chicago, treats flexion by the use of slippery-elm tents (an admirable suggestion), whilst Dr. W. L. Atlee rejects the use of pessaries altogether in his practice.

In the hands of the reviewer the use of, first, *laminaria* tents; secondly, Smith Hodge's or Grailly Hewitt's anteversion pessaries; and, thirdly, faradic electricity to the uterus by the sound within the uterine canal, have been very successful, and thus far devoid of danger.

X. Supplement to the Report of a Case of Xenomenia made at the First Annual Meeting in 1876. By Dr. Theophilus Parvin, Indianapolis, Ind. XI. A Case of Vaginal Ovariotomy. By Dr. William Goodell, of Philadelphia, Penn. Two papers well worth reading.

XII. Is there a Proper Field for Battey's Operation? By Dr. Robert Battey, of Rome, Ga., is ably answered by the originator of the operation. The remarks of Dr. Peaslee during the discussion are of special value. The paper and its discussion is pregnant with food for thought.

XIII. Subsulphate of Iron as an Antiseptic in the Surgery of the Pelvis. By Dr. H. P. C. Wilson, of Baltimore, Md. Although Dr. Wilson thinks pessaries of but little value, he evidently is convinced he has found *the* great antiseptic. Monsel's solution is his "hobby" undoubtedly; nevertheless Dr. W. brings forth such a number of facts as to well warrant the fair trial of this agent by gynæcologists and surgeons.

XIV. Tetanus after Ovariotomy, by Dr. Theophilus Parvin, of Indianapolis, Ind., is the report of a fatal case which occurred in the author's practice. He gives a table of such cases. XV. Sarcoma of the Ovaries. By Dr. Washington L. Atlee, of Philadelphia, Penn. A very interesting paper upon an extremely rare disease. The whole article must be read to be appreciated. XVI. The Value of Electrolysis in the Treatment of Ovarian Tumors, as seen in the Light of Recent Experience, by Dr. Paul F. Mundé, of New York; is a long and exhaustive article. The author concludes that electrolysis compares unfavorably with ovariotomy, and can only be thought of in, *a*, small monocysts, where a serious radical operation is uncalled for; *b*, large tumors having extensive, especially pelvic adhesions. XVII. Congenital Absence and Accidental Atresia of the Vagina; Mode of Operation to Establish the Canal, and to Evacuate retained Menstrual Blood. With three woodcuts. By Dr. Thomas Addis Emmet, of New York. XVIII. Case of Sarcoma of the Kidney in a Negro Child. With heliotype. By Dr. W. H. Geddings, Aikin, S. C. XIX. The Hystero-Neuroses. By Dr. George J. Engelmann, of St. Louis, Mo. Must be read to be appreciated. XX. Cases Illustrating Important Points connected with Ovariotomy. By Dr. Gilman Kimball, of Lowell, Mass. And these points are: 1. The treatment of hemorrhage following the breaking up of adhesions, by *prolonged pressure with soft cotton cloth* (in certain cases), by excluding the bleeding peritoneal surfaces from the abdominal cavity with *quilled sutures*, and, again, by the *excision* of large portions of the *omentum*. 2. The treatment of subacute inflammation and septicæmia by *drainage*, *antiseptic injections*, and the *early* and *liberal use of nourishment* and *stimulants*. Eight illustrative cases are given in detail. XXI. The Radical Treatment of Dysmenorrhœa and Sterility by Rapid Dilatation of the Canal of the Neck of the Uterus. With one woodcut. By Dr. Elwood Wilson, of Philadelphia, Penn. XXII. Dr. Uvedale West's Views of Rotation, as illustrated by the Contrast between the Mechanism of Simple Occipito-Posterior Positions and those of the Bregmato-Cotyloid Variety. By Dr. John P. Reynolds, of Boston, Mass. The former article advances nothing especially new. The second may be read with interest and profit. XXIII. Vascular Tumors of the Female Urethra; with the Description of an Instrument Devised to Facilitate their Removal. By Dr. A. Reeves Jackson, of Chicago, Ill.; XXIV. The Simpler Varieties of Perineal Laceration; their Consequences and Treatment. By Dr. Thaddeus A. Reamy, of Cincinnati, Ohio, merit no especial mention further than to say Dr. R.'s instrument is simply a very small size glass reflecting rectal speculum. Dr. Reamy exhorts us to repair all lacerations, *however slight*. XXV. Lying-in Hospitals; especially those in New York. By Dr. Henry J. Garrigues, of Brooklyn, N. Y. The author concludes, from quite an extensive observation of lying-in hospitals in New York City and its immediate vicinity, that, properly managed, large hospitals are not to be feared; that preventive antiseptic treatment is desirable; that there is room for the improvement of the condition of these hospitals in New York. XXVI. The Cyclical Theory of Menstruation, by Dr. John Goodman, of Louisville, is an article well worth the most careful consideration. The author's theory is opposed to that of ovular menstruation, and may be briefly expressed as that of a law of periodicity, the operation of this law being presided over by the ganglionic nervous system. XXVII. In Memoriam Charles E. Buckingham, with a heliotype portrait, by Dr. George H. Lyman, of Boston, Mass.; Index of Obstetrics and Gynecological Literature of all Countries, from July 1, 1876, to January 1, 1877, close this valuable work. This review demonstrates the

practical worth of this second volume of transactions, and, congratulating the Society upon its latest achievements, we feel that we are only performing our duty in recommending every practitioner who is interested in gynecology to add this volume to his library. It is handsomely printed on cream colored paper. Heavier binding would have been more suitable, however.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Nov. 13, 1878.

DR. J. C. PETERS, PRESIDENT, IN THE CHAIR.

(Concluded from page 477.)

LUMBO-ENTEROTOMY INSTEAD OF LUMBO-COLOTOMY.

DR. C. K. BRIDDON presented a specimen of small intestine which had been taken up instead of the colon in the operation for lumbo-colotomy, and gave the following history: Colored woman, aged about 30, had been in the hospital department of the Colored Home for some time, suffering from the effects of stricture of the rectum. She was broken down with syphilis, had a number of perineal fistulæ and stricture reaching pretty high up; she had passed through some dangerous attacks of obstruction, the last occurring nineteen days before her death, when her temperature rose to 102°.

Operation was made October 24, 1878, in the presence of Profs. Alfred C. Post, Jos. W. Howe, Dr. Geo. F. Shrady, and others. It was designed to open the colon in the left lumbar region; a point was marked precisely half an inch behind the centre of the ilium—transverse incision about four inches long between lower rib and crest of ilium. The outer border of the quadratus lumborum was clearly exposed, and, on dividing the abdominal fascia immediately external to that landmark, a small portion of fat projected into the wound, followed by intestine; the intestine was covered by filamentous tissue, which was separated to some extent by tearing, and the intestine looked precisely as I have ever seen it when the colon was exposed. It is quite certain that the free surface of the peritoneum was not exposed to view. The intestine was transfixed in the usual manner, and attached to the neighboring integument.

For five or six days after the operation the patient did well. The only circumstance I noticed that was unusual was the fact that the intestinal discharge was very thin, and caused a good deal of excoriation of the skin; but the wound by that time was nearly all united. After the sixth day the patient gradually sank, and died on the tenth day after the operation.

At the autopsy Dr. F. E. Russell found a loop of small intestine, six and a half feet from pyloric end of stomach, converging and united to operation-wound in left lumbar region; parietal peritoneum formed a funnel-shaped depression at that point, and was also united to the integuments of the loin. There was evidence of very slight peritonitis, limited entirely to the immediate vicinity of the junction of the serous membrane with the skin.

The colon was remarkably contracted, from the splenic curvature to its termination in the rectum. At some points its diameter was less than half an inch. It lay half an inch within the external border of the quadratus lumborum; its coats were opaque, thickened, contracted, and wanting in their usual resiliency; near the rectum the mucous membrane was studded with spots of ulceration. Post-mortem analysis of this case would show the sequence of events in the operation to have been as follows: After incision of the deep abdominal fascia, the parietal layer of the peritoneum in the immediate vicinity of the outer border of the quad. lumb. was projected into the operation-wound, like a hernial sac pushed outward by a loop of small intestine; the sac of peritoneum was intact, and was only interfered with when the gut was transfixed and united to the integument.

I don't see any precaution that would have obviated such a result. The preparation shows that the operation-wound was precisely and immediately external to the deep landmark, the quad. lumb. at the exact spot where the colon generally presents. We do not always see those marks which distinguish large from small intestine. The hernial sac, as it presented in the wound, was not influenced by the movements of respiration. The operation was regarded as a remarkably easy one, and not a doubt was entertained by any one present as to the character of the gut; in fact, where the colon is contracted to such an extent as to leave unoccupied the place where it is usually found, and that space yields to the pressure of small intestine covered by parietal peritoneum, I do not see how the condition can be distinguished unless by a procedure suggested by my friend, Dr. T. T. Sabine, who says that by pinching up the protruded walls between the finger and thumb you may distinguish between mucous and serous membranes, by their different thicknesses. Such a test might avail, but I think that in the majority of cases the newly-formed sac would be found too tensely stretched over the gut to permit of such manipulation.

DR. MASON remarked that the accident of taking up the wrong gut in lumbo-colotomy was a rare occurrence. Several cases had, however, been reported, and in none of them were the results seemingly within the control of the surgeon. Several years ago Dr. Mason met with such an accident himself, the colon having been bound down and displaced by old adhesions. At the time the intestine was exposed during the operation there was no doubt in the minds of any of the gentlemen that it was the colon. It proved afterward, however, to be the jejunum.

A SURGEON LOSES HIS RIGHT HAND — REMARKABLE FORTITUDE.

DR. BRIDDON presented a second specimen, which consisted of the right hand, which had been severed by a heavy cutting-knife in a bookbindery. The victim of this unfortunate accident was Dr. Leavitt, of this city, who exhibited a coolness and fortitude under the great mental and physical strain which constituted the remarkable feature of the case. On the afternoon of October 29, the patient paid a visit to a bindery, in which he was pecuniarily interested; and while standing by the machine, accidentally set in motion, the knife came down upon his right hand, severing it just below the wrist and through the second row of carpal bones. Dr. L. promptly seized the stump, controlled the hemorrhage, covered the wound with bandages, and then wrapped the right hand in a towel and rode in a street-car from Fourteenth Street to Fifty-first Street, a distance of nearly two miles. Dr. Briddon was asked by Dr. Hadden to see the case in the evening, when a consultation was held with Drs. Hadden, Geo. F. Shrady, and Beckwith, resulting in a decision to amputate at the wrist-joint. During the consultation the patient himself discussed the practi-

cability of merely trimming the stump and not sacrificing the carpus. The skin was so extensively separated from the dorsum of the wrist that it was impossible to cover those bones, there being barely enough integument upon the palm for a stump of the wrist. After the operation was determined upon, the patient busied himself in arranging his room, in fixing the operating-table, and attending to many other details. He carried his personal interest in the operation to the extent of requesting that no ether should be administered to him. This wish, for obvious reasons, was not gratified. The amputation was performed in the usual way, and a flap was made from the palm of the hand.

EPITHELIOMA—BLEPHAROPLASTY.

DR. NOYES exhibited a small specimen of epithelial growth removed by operation from the eyelids, which was of interest in connection with the means used to fill up the gap which was left. The patient was a lady aged 50 years. Nineteen years ago she noticed a small growth on the inner border of the lower lid, near the punctum. This remained stationary for ten or twelve years, when it began to spread along the border of the lid and at the same time broke down in ulceration. Within the past year the disease extended itself over the lachrymal sac, involved the inner portion of upper lid, and made in all a tumor the size of a hazel-nut. Two-thirds of the lower and one-third of the upper lid were occupied by the disease as well as the adjoining side of the nose. The operation of removal was performed without difficulty, the tumor shelling out from the underlying tissues easily. The lachrymal sac was exposed, but was not opened. Actual cautery was employed along the inner portion of the wound. In order to fill up the deficiency of the growth occasioned by the extirpation, a vertical incision was first made in a line with the inner canthus and along the side of the nose to the reflection of the mucous membrane of the gum. From the outer canthus an incision was also extended horizontally across the malar bone to within a half inch of the ear. The flap thus created was dissected up and slid inward toward the nose, thus restoring the lower lid. A space was left on inner canthus and inner portion of upper lid. An attempt was made to fill up this space by transplanting a severed portion of skin from the arm, according to the method proposed by Mr. Wolf of Glasgow. But sloughing of this piece occurred, owing, as Dr. Noyes thought, to the fact that actual cautery had been previously used in that portion of the bed of the wound. Union occurred by first intention throughout the flap for the lower eyelid. A second attempt to fill up the vacancy of inner portion of upper lid was made shortly afterward. An incision from the upper limit of the gap was made horizontally across the root of the nose, and then at right angles downward. The flap thus created was turned upon itself edgewise and accurately adapted to the edges of the gap. Her recovery was complete and satisfactory. The tumor was examined by Drs. Bull and Satterthwaite, and found to be an epithelioma.

REMOVAL OF MELANOTIC EPITHELIOMA FROM EYEBALL, SAVING THE EYE.

DR. NOYES presented a small malignant tumor which he removed from the exterior of the eyeball, and at the same time preserved the eye. The patient was a gentleman, aged forty-eight years, who first noticed a small black speck on the white of the left eye seventeen years ago. This remained stationary for twelve years, and then grew slowly for five years. Within the past year the increase had been very rapid, presenting a black raspberry appearance, overlapping the outer third or more of the cornea and nearly as much of the adjacent sclerotic. On looking at it, the first impression was that it grew from the interior of the eye; but a closer examination showed that the eye was perfect, and that the eyeball was not affected. The patient came to Dr. Noyes after having seen other ophthalmologists, who advised enucleation of the eye. It struck Dr. Noyes, however, that the tumor could be detached from the surface of the globe, and he accordingly made the attempt. The operation was performed by a curved scissors, and was entirely successful. The tumor grew from the episcleral tissue and from the limbus. The surface of the wound was easily covered by dissecting up the edges of the conjunctiva and bringing them together. The growth was examined by Drs. Bull and Satterthwaite, and found to be a melanotic epithelioma. Dr. Noyes concluded the presentation of this interesting specimen by an exhaustive review of the literature of the subject.

IMMENSE VESICAL CALCULUS.

DR. WEIR presented an immense vesical calculus removed by Dr. C. T. Gardner, of Providence, R. I. It weighed twelve and a half ounces, measured in its several diameters three and three-eighths inches, three and one-eighth inches, and two and a quarter inches, and had for a centre a small oxalate calculus, the periphery being made up of phosphates. The operation for its removal was commenced with the lateral incision, but was afterwards extended into the bilateral section, as the instruments on hand were insufficient to crush it *in situ*. The patient, a man of 49 years, did well after the operation; a rectal fistula that formed from sloughing spontaneously closed.

Until he had looked this afternoon into Eve's "Surgical Cases," Dr. Weir was under the impression that the stone exhibited was the largest that had successfully been removed entire in this country by the perineal section. But he found in that work a record of a calculus removed by Dr. Mettauer, of Virginia, weighing sixteen ounces, with recovery of the patient. Abroad, Mr. Hadmer, of Norwich, England, has the credit of having in 1746 successfully extracted a stone weighing nearly fifteen ounces. Mr. Mayo, of Winchester, England, removed one of fourteen and a half ounces, but it was broken before extraction.

LITHOTOMY—CAUSES OF RETENTION OF URINE.

DR. WEIR presented also an unusually fine specimen of a very rough calculus of uric acid and oxalate of lime, which weighed 1½ ounces, and measured 1¾ inches in diameter, which had been removed by him successfully by the lateral operation in June last. An attempt was made immediately prior to the operation to crush the stone after Bigelow's method; but all the instruments resorted to—Weiss's, Keyes', and even one of Bigelow's—failed to accomplish this end. The stone resisted so stoutly the influence of the screw power of the large lithotrobe of Bigelow as to break the attachment of the screw at its outer end. In respect to the operation itself, Dr. Weir called attention to the difficulty, that was not unfrequently noticed with a deep perineum, in effecting satisfactorily the section of the mouth of the bladder—a failure attributed in one instance that had occurred to him to the end of the staff not being sufficiently far in the bladder. To obviate this, in the present case a staff was employed, which was almost rectangular, and the vesi-

cal end of which was some two inches longer than the ordinary instrument. Yet with the aid of this instrument a subsequent nicking of the other side of the prostate was necessary to extract the stone. With the free division of the prostate, there was, moreover, for nearly forty-eight hours, retention of urine, only relieved by the catheter. This condition, which has only occasionally been noticed after the lateral operation for stone, is probably due either to coagula, or to the general swelling of the more or less centred parts, or, as was suggested by Dr. Sands in a similar case, to the tumefaction of an enlarged median lobe.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 8 to December 14, 1878.

KINSMAN, J. H., Capt. and Asst. Surgeon. Granted leave of absence for one month, with permission to apply for one month's extension, provided he furnish a substitute at own expense. S. O. 94, Dept. of the South, Dec. 5, 1878.

KOERPER, E. A., Capt. and Asst. Surgeon. Granted leave of absence for one month, with permission to apply for an extension of three months. S. O. 110, Dept. of the Platte, Dec. 3, 1878.

LAUDERDALE, J. V., Capt. and Asst. Surgeon. Granted leave of absence until February 1, 1879. S. O. 262, A. G. O., Dec. 6, 1878.

SKINNER, J. O., 1st Lieut. and Asst. Surgeon. Assigned to duty at Camp Lowell, A. T., as Post Surgeon. S. O. 137, Dept. of Arizona, Nov. 28, 1878.

WILCOX, T. E., 1st Lieut. and Asst. Surgeon. When relieved, to proceed to obey the orders he has received from Headquarters of the Army. S. O. 221, Dept. of the Missouri. Dec. 6, 1878.

BARNETT, R., 1st Lieut. and Asst. Surgeon. Leave of absence extended one month. S. O. 99, Div. of the Missouri, Dec. 5, 1878.

GARDINER, J. D., 1st Lieut. and Asst. Surgeon. Assigned to duty as Post Surgeon at Camp Huachuca, A. T. S. O. 137, C. S., Dept. of Arizona.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT.— Comparative statement of cases of Contagious Diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 14, 1878.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Dec. 7, 1878..	0	7	120	1	8	55	0	0
Dec. 14, 1878.	0	10	168	5	1	50	0	0

DR. EMELINE H. CLEVELAND, who died on Sunday, December 8th, at her residence, Eighteenth and Mount Vernon Streets, Philadelphia, of consumption, was born in Connecticut, September 22, 1829. She was educated at Oberlin College, went to Philadelphia in 1853, graduated at the Woman's Medical College in 1855, and became Demonstrator of Anatomy at that institution. In 1857 she was elected Professor of Anatomy there, and subsequently was sent by the college to Paris, where she entered the Maternity Hospital, and for a year studied its organization. Upon returning to Philadelphia, she resigned the chair of Anatomy and accepted that of Obstetrics and Diseases of Women and Children, and also became resident physician of the new Maternity Hospital of the college. In 1867 she was made a corporator of the college. Her private practice growing large, she resigned as resident physician, but retained her professorship until the close of the last session. To her was mainly due the success of the Hospital's Training School for Nurses. She leaves a husband and one child.

FREDERICK GREENWOOD SNELLING, M.D., of whose sudden death notice has already been taken, was born in New York, July 26, 1831. His parents were Andrew Symmes Snelling, Esq., of Boston, and Eliza Templeton Strong, daughter of the late Benjamin Strong. He was educated at the University of New York, and graduated at the University Medical College in 1859. At the breaking out of the war he volunteered with Col. Berdan's Sharp Shooters as Assistant Surgeon, and was at the battles of Hanover Court House, Big Bethel, Siege of Yorktown, West Point, White House, Cumber Landing, Cold Harbor, and on the Chickahominy. He was next promoted to Brigade Surgeon to General Martindale's Division, and as such was at the battles of Fair Oaks and Seven Pines. He was then made Division Surgeon in Gen. Burnside's and Foster's Commands and sent to North Carolina, where he planned, built, and stocked the Hardy, Foster, and Morehead City General Hospitals, and renovated the Hammond and Old Navy Hospitals, fitting up over 2,500 beds. He also established port hospitals at Washington, N. C., Plymouth, and Hatteras Inlet. He was then made Medical Director of the Department of North Carolina, and at one time had 167 Surgeons and Assistant Surgeons reporting to him, with about 3,000 sick and wounded under charge, He was present at the battles of Southwood Creek, Kinston, Whitehall, and Goldsboro. He volunteered, with his friend Col. Gourand, to convoy food and ammunition to Little Washington, N. C., when this was invested by the enemy, and succeeded in so doing under a very heavy fire. He next followed Gen. Foster to South Carolina and participated in the first operations against Fort Sumter and Charleston.

Late in 1864, when his health was much broken by Chickahominy and other fevers, and suffering much from chronic diarrhœa and dyspepsia, he was prevailed to resign, and soon after accepted the position of medical examiner of the Mutual Benefit Life Insurance Company, which he held until his death. Dr. Snelling was very fond of surgery and dissected much almost every season, and thereby materially increased his ill-health. For the last four years of his life he suffered almost daily pains, and had very sleepless nights. He was forced to stay in almost every evening, and was generally in bed by nine o'clock. He served for many years at the New York Eye and Ear Infirmary, and was well posted on all diseases of the eye, ear, and throat. His great characteristics were his high sense of honor, his great conscientiousness in every line of duty, and his earnest and devoted application to every pursuit which he undertook. His delicate health long prevented him from going out in the evenings, and prevented him from attending the meetings of the medical societies; but he was a member of almost all of them, and most cheerfully paid all his dues for the benefit of the whole. It has often been a matter of wonder how cheerfully and manfully he bore himself by day when almost every

night was passed in severe suffering. He was always exceedingly gentlemanly and courteous, and kind to many who were not nearly as sick as himself. J. C. P.

ROBERT NILLIS, M.D., Librarian of the Royal College of Surgeons, England, died at Surrey on the 21st ult., in the eighteenth year of his age. He had just completed a life of Harvey.

GURJUN BALSAM IN GONORRHŒA.—The following is Vidal's formula: Gurjun balsam, gmm., 4.00; gum, gmm. 4.00; infusion of anise, gmm. 40.00. M. Divide into two doses, and take one immediately before meals. Gurjun balsam is cheaper and acts more rapidly than copaiva, and has no disagreeable effect on the stomach.

YELLOW FEVER IN MEMPHIS, TENN., IN 1855, ETC.—The following item is an extract of a brief history of the progress of yellow fever in Memphis, Tenn., in 1855, by Dr. L. Shanks: "Previous to the late epidemic, Memphis has been regarded as being above the yellow fever region in the Mississippi Valley, and secure against its origin and development as an epidemic, from any cause. Memphis has heretofore occupied a position on the Mississippi River, above the region in which cases of the yellow fever have originated; and though exempt from the disease, the citizens, and especially the physicians, have been familiarized with it, by the number of cases on the boats passing up the river, when it has prevailed as an epidemic in New Orleans, Natchez, Vicksburg, and at other places below. The boats coming from the infected places always landed here, and were freely visited by the citizens and physicians when either business or the professional call of the physician required it. In this way the sick passengers upon the boats were not only frequently seen and administered to, but when they desired it were occasionally removed from the boats to the hotels and boarding-houses in the city, to be better attended to in the way of nursing and having medical aid. No fear ever existed here of the propagation of the disease by cases thus brought from the infected boats on the river into the city; and no instance has occurred in which a single case of the yellow fever has thus been produced here by contact with the sick, the dying, or the dead from the boats. The non-contagiousness of the disease has not only been demonstrated here in that way for many years, but it has been still more largely confirmed by the results at the Memphis Charity Hospital. When the yellow fever has prevailed as an epidemic in New Orleans, there has always been cases occurring on the boats after leaving that city, before their arrival at this port. Many of these cases have been put off at the landing here, and sent through the city to the hospital, in former years. In 1853, about sixty cases; in 1854, forty cases; and in 1855, forty-two cases were thus sent from the boats to the hospital. Of these cases a large proportion died, as they were sent out at an advanced period of the attack; but not a single instance has ever occurred of a nurse, or other patients, or persons in or about the hospital taking the yellow fever from these cases."

ANALYSIS OF ADULTERATED BUTTER.—The City Chemist of Cleveland, Dr. Classen, in a recent report on butter adulterated by mixture with lard, gives a simple method of testing for this fraud. The suspected butter is melted, and about fifty grains of it poured into a test-tube. When this is cooled to the temperature of the human hand, there is to be added, mixing slowly by agitation, 120 grains pure sulphuric acid. If the butter is pure, the mixture will at once become yellow, and afterward a bright yellowish red. If lard is present, the mixture will pass from the color last named to brownish red, brown, and, perhaps, brownish black.

RARE CASE OF FECUNDITY IN THE BOVINE RACE.—In the village of Kerdane, France, a cow recently dropped at one birth four calves, two males and two females. From lack of proper care the two latter perished, suffocated by the mother. The same cow had two calves in the preceding year, her production thus amounting to six in one twelvemonth.

TREATMENT OF GONORRHŒA.—Lecchini recommends for acute gonorrhœa, two injections daily of a solution of chloral hydrate (1 : 100). He claims that it relieves rapidly the most troublesome symptoms, and even effects a cure after only a few injections.—*Deutsche Med. Wochen.*

TREATMENT OF ULCERS.—Dr. Mandelbaum asserts that ulcers of the leg which have proved rebellious to all other methods of treatment, can be invariably cured by scraping, followed by the application of iodoform which must be continued for several days, and, after fresh granulations have appeared, by firm pressure with equal parts of mercurial and soap plaster.—*Berl. klin. Wochen.*

SUPERFŒTATION.—Dr. S. E. Ranney, of North Bennington, Vt., writes: "One of those very rare cases of apparent, if not real, superfœtation has just fallen under my observation. The woman is colored; the children born were both premature and dead. The first presentation was a fœtus of about three and a half or four months, living in a complete house of its own. The delivery was easily accomplished, and a placenta corresponding to the size of fœtus was soon removed; on examination, there presented the head of another, of nearly eight months' growth, also in its own proper sac, with large placenta. The smaller fœtus showed no signs of decay, and appeared in all respects like an ordinary product of three and a half to four months' growth.

"If this is simply arrest of growth on account of early death in the smaller fœtus, can it be explained why nature did not much sooner expel it?"

TURPENTINE-VAPOR BATHS IN RHEUMATISM are highly recommended for the chronic form. Place the patient in a wooden chest, allowing the head to remain free. Conduct into this wooden chest steam loaded with oil of turpentine spray. The temperature of the bath should be 104° F. to 113° F. Let the patient remain therein about fifteen minutes. Repeat them according to the nature of the case.

HOOPING COUGH AND ULCERATION OF THE FRÆNUM.—A recent report before the Academy of Medicine in Paris, says that the ulceration is an affect rather than a cause of the disease, and is due to the protrusion of the tongue and the scraping of its under surface against the teeth, in the act of coughing.

THE YELLOW FEVER FUND.—The committee of the Medical Society of the County of New York has received $100 from Dr. Marion Sims, now in Paris, and $179.46 from the Hon. Smith Ely, Esq., Mayor of the City of New York, the unappropriated balance remaining in his hands, of which $106.40 comes from the remaining funds of the Citizens' Relief Committee, per I. A. Tappan, Treasurer; 290 francs from I. E. Montgomery, Esq., U. S. Consul at Geneva; $24 from Messrs. Allan Hay & Co.; $16.28 through Capt. Petty of the Fourth Precinct of this city; from V. N., $5; and cash, $2.68. Total, $179.36.

Original Lectures.

LECTURES ON CLUB-FOOT.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK (SPECIAL COURSE).

By JOS. C. HUTCHISON, M.D.,

VISITING SURGEON TO THE BROOKLYN CITY HOSPITAL; SURGEON-IN-CHIEF TO THE BROOKLYN ORTHOPEDIC INFIRMARY; CONSULTING SURGEON TO THE KINGS COUNTY, ST. PETER'S AND ST. JOHN'S HOSPITALS, ETC.

LECTURE V.

TALIPES VALGUS, OR FLAT-FOOT: CONGENITAL AND NON-CONGENITAL—MORBID ANATOMY—TREATMENT.

We will now, gentlemen, consider another deformity of the foot, known as talipes valgus. This distortion is the direct opposite of varus, and is much less common, especially as a congenital affection. We shall study first the congenital form.

An attempt has been made to distinguish between flat-foot and talipes valgus, but the distinction is purely arbitrary, and they should be regarded merely as degrees of the same distortion. The term flat-foot

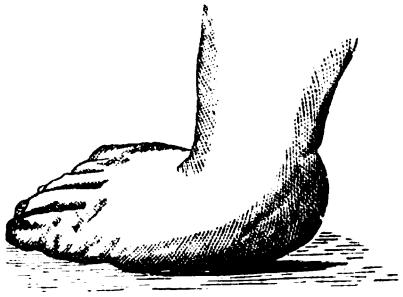

FIG. 17.

is applied to that condition in which there is simple sinking of the arch of the foot; and valgus to that state, in which, in addition to the obliteration of the arches, there is eversion and elevation of the outer border of the foot, and the weight of the body rests on its inner margin. The cast represents this deformity a little more marked than we usually see it. (Fig. 17.)

FIG. 18.

A more severe distortion is shown by this cast. (Fig. 18.)

The arches of the foot, which you will remember are scarcely perceptible in early infancy, are held in position chiefly by the calcaneo-scaphoid ligament, and the ligaments connecting the scaphoid with the cuboid and cuneiform bones. A weakness or congenital elongation of these ligaments permits the arches to sink. The foot consequently presents a flattened appearance, and its various movements are seriously interfered with. Sometimes the longitudinal arch is reversed, so that the plantar surface of the foot is convex instead of being concave. This flattening of the arches, together with a greater or less degree of eversion of the anterior part of the foot, which takes place at the transverse tarsal joint, constitute the essential features of valgus.

When, in addition to the deviation just described, we have elevation or depression of the os calcis, the compound varieties of talipes, *equino-valgus* and *calcaneo-valgus* are produced. But these do not merit special consideration; they may be considered as cases of talipes valgus, with or without contraction of the gastrocnemius muscle. When the patient begins to walk, all the external characteristics of congenital valgus become more marked, and the pain and inconvenience which he suffers in walking are much greater from this deformity than from congenital varus.

Morbid Anatomy.—Dissection shows that the deviation of the foot in valgus is due to the rotation of the bones of the posterior part of the foot, particularly the scaphoid and the os calcis; on the cuboid, the deviation of the bones, however, is not so great as in the varus; the os calcis is rotated to such a degree that its inner concave surface is turned downward, and its long axis has become oblique from behind forward, and from without inward, and its tuberosity is elevated to a variable extent.

The *astragalus* may occupy its normal position, or it may be tilted forward and obliquely downward at birth, by the elevation of the tuberosity of the os calcis. The scaphoid and cuboid undergo a certain amount of rotation, and are completely luxated upon the astragalus and os calcis. On the inner side of the foot three bony prominences are noticed: the internal malleolus, the head of the astragalus, and the tubercle of the scaphoid, which is much depressed.

The *ligaments* on the inner side of the foot are elongated, while those on the dorsum and external side are shortened; exactly the reverse of what is observed in congenital varus. It is unnecessary to go into details.

The muscles in this deformity, as in cases of congenital varus, are merely shortened without alteration of structure; and, after the cure of the deformity, the muscular power of the limb is unimpaired. The deviation in the direction of the tendons is less marked in valgus than in varus, and they are less easily recognized.

In ordinary cases the contracted muscles are the peronei and the long extensors of the toes, and in severe cases the triceps suræ.

The peroneus tertius and the long extensors of the toes, in their action, raise the outer edge of the foot; the peroneus brevis and the longus abduct the anterior part.

The prognosis in congenital valgus is usually favorable. When the treatment is begun at an early age the distortion is then easily overcome, and the usefulness of the limb can, as a rule, be perfectly established. When, however, the limb has been walked upon for some time, or when the deformity is associated with some malformation of the leg, there is greater difficulty in effecting a perfect cure.

NON-CONGENITAL TALIPES VALGUS.

The external character and the changes in the relative positions of the bones which are observed in con-

genital valgus, are so similar to that of the non-congenital form of the affection, that the description of the former may properly be applied to the latter. The longitudinal and transverse arches of the foot are obliterated, so that the inner margin of the sole rests flat upon the ground in standing. At first the arches are partially restored when the superincumbent weight is removed; but, after a time, the gradual yielding of the tarsal ligaments in the sole of the foot causes the foot to remain flat. In persons who stand much these ligaments sometimes become so much elongated that the plantar surface becomes convex, reversing the normal arches of the foot, as in the congenital form. The *outer margin* of the foot is not raised, as in the congenital variety, because there is no active muscular contraction; in fact, there is a feeble and over-stretched condition of the muscles. There is more or less eversion of the foot. Obliteration of the arches of the foot, producing flat-foot, is therefore the essential characteristic of non-congenital valgus. In cases of very long standing, however, the foot, from long-continued use, becomes bent upon itself at the transverse tarsal joint, and is held in this position by the muscles, which become permanently shortened.

This form of valgus may be caused by infantile paralysis affecting one or both tibial muscles; sometimes it follows convulsions which have been excited by dental irritation, or by febrile disorders; it may result from injuries or disease of the ankle-joint or foot; or from debility of the ligaments and muscles, accompanied by general debility. It often arises from the patient having been in the habit of carrying heavy weights, or from being for many hours in succession on his feet, especially if he has not a vigorous physique.

TREATMENT OF CONGENITAL VALGUS.

The pain and lameness produced by talipes valgus are greater than exist in any other deformity of a similar degree, and hence this branch of the subject should receive your most careful attention. The rules laid down for the treatment of congenital varus apply equally to the deformity now under consideration. A judicious combination of the physiological, mechanical, and operative means, varying as the amount of deformity and the rigidity of the foot vary, is as important in one distortion as in the other. If the foot can be completely adducted, or brought nearly into its normal relations with the leg by the hand, tenotomy is not usually required. In such cases we can effect a cure by the application of gypsum or felt splints, in the manner already shown for the treatment of varus. The foot, however, must be forced into a position directly the reverse of that practised in varus—by grasping it with the hand in front of the medio-tarsal joint, and forcing it inward, elevating at the same time its inner border; while, with the other hand, the heel, if it is elevated, is forced downward. The foot is held in this position until the plaster "sets." The same rules for the removal and re-application of the plaster, and for the physiological treatment of varus, are applicable to this deformity. When the distortion has been overcome by the treatment here described, an apparatus essentially similar to that used in varus, but acting in an opposite direction, should be applied (Figs. 12 and 13). A convex pad should also be placed inside the shoe in the normal situation of the arch of the foot. This presses inward and upward, and elevates and supports the arch of the foot. As soon as the child is able to walk, it should be encouraged to do so, for the weight of the body on the foot assists materially in the removal of the last traces of the deformity.

If the tendons continue rigid, and the distortion is not overcome by the diligent use of plaster-of-Paris splints for three or four weeks, it is then necessary to resort to tenotomy. The peronei tendons only require division in the slighter cases. In more severe cases, it may be necessary also to divide the extensor longus digitorum and peroneus tertius. When the gastrocnemius is tense and unyielding, producing equino-varus, the tendo Achillis should be divided. The rule is to divide the tendons when retraction has not been overcome. The peroneus longus and brevis tendons may be divided one inch above the external malleolus in the following manner: The leg, lying upon the inner side, is firmly held by an assistant with one hand, while the foot is forcibly adducted by the other. You then, with the forefinger of the left hand, feel for the tendons, which you will generally find raised above the level of the fibula; introduce the tenotome flatwise between the bone and the tendons, turn the sharp edge of the knife to the tendons, and divide them transversely. The extensor longus and peroneus tertius should be divided, when necessary, just where they pass over the ankle-joint, in the following manner:

The foot is adducted by an assistant, a puncture is made close to the inner side of the extensor longus, a tenotome is passed beneath the tendons, and they are divided from below upward towards the skin. The tendons are prominent and tense, so that you will have no difficulty in ascertaining that they are completely divided. If it is also necessary to divide the tendons of the anterior tibial and extensor pollicis—and this is sometimes the case in old subjects—the knife can be re-entered at the same puncture, and carried in the opposite direction beneath the tendons, flatwise, and cutting towards the skin. You can then apply a pledget of lint over the puncture, and secure it in position by a strip of adhesive plaster and a bandage around the foot and ankle. The part should at once be put into a plaster-of-Paris or felt splint which has been carefully moulded to the deformed foot before the operation, and kept in this position for three or four days. When all the dressings are removed, the parts well washed, a plaster splint applied in the manner already shown, and the foot forced toward its normal position, this splint should be removed every third or fourth day, at each application bringing the foot nearer to its natural position. When the deformity has been reduced, the foot can be retained in an appropriate club-foot shoe without pain or inconvenience. In some severe cases, it may be necessary to use an apparatus which extends up the thigh, with a free hinge-joint at the knee. It is merely an elongation of the ordinary apparatus, but is more powerful in its action.

The club-foot shoe should be worn during the day for six or twelve months, in order to allow the bones, muscles, and ligaments to adapt themselves to the changed position of the foot. After the removal of the deformity, and to guard against relapse, a retentive apparatus should also be worn at night. This may consist of a lighter metal shoe or of a felt splint.

The physiological treatment is as important here as in varus, and should be practised during the whole course of the treatment, until the functions, as well as the form of the foot, are fully restored.

The tendency to relapse is not so great in valgus as in varus, because it is a less complicated deformity, and it may be prevented by the use of an ordinary shoe. After the club-foot apparatus has been laid

aside, which has the heel raised on the inner side, so as to throw the weight on the outer side of the foot, and an elliptic steel plate inserted in the sole of the shoe, for the purpose of sustaining the arch of the foot, this support must be gradually discontinued (Fig. 19).

FIG. 19.

The *treatment* of *non-congenital valgus* is essentially similar, in principles and in detail, to the treatment appropriate to the congenital form. Operative treatment, however, is rarely necessary, the mechanical and physiological means alone being sufficient, in a large majority of cases, to effect a cure.

The next frequent cause of non-congenital valgus is general and local debility, producing what is commonly called "flat-foot;" and in these cases the general health should receive careful attention. Fresh air, good food, iron, quinia, etc., should be judiciously used; while, in many cases, the only local treatment required is a properly-constructed valgus shoe, such as I have before described (Fig. 19).

In more severe cases, it may be necessary to carry a steel support from the shoe up the leg on the outer side, to be connected with a plate which surrounds the calf, having a joint at the ankle. This apparatus is sometimes required for many years.

When there is marked eversion of the foot and deviation of the heel, we endeavor to reduce the deformity with the plaster-of-Paris splint in the manner already described, and, when the distortion is overcome, the club-foot shoe already recommended should be applied. When, as in severe and long-standing cases, the deformity cannot be overcome by mechanical means, it may be necessary to divide the tendo Achillis or the extensor and peronei tendons; but tenotomy will seldom be required in non-congenital cases.

Special exercises, frictions, galvanism, etc., are extremely important in this form of club-foot, especially when it has a paralytic origin; indeed the physiological treatment, properly and thoroughly carried out, not only contributes to the cure, but also materially aids in preventing a relapse of the deformity.

ANTI-CONSTIPATION.—The following pills are recommended highly for inertia of the intestinal muscular coat, with deficient secretion of intestinal mucus: ℞. Ext. nucis vom., gr. vj.; ext. belladon., gr. iij.; pulv. ipecac, gr. xij.; ext. colocynth co., gr. xxxvj. M. divid. in pil. xij. Sig.—One at bedtime.

Trousseau recommends a pill of gr. ss. ext. belladon. to be taken at bedtime for constipation, persevering in this treatment for at least a month.

A writer to the *British Medical Journal* advises for the same trouble the following: Put into a basin or bowl two or three tablespoonfuls of Scotch pea-flour, adding some salt. Pour sufficient boiling water thereon to cover the mixture, beating or stirring it into a *paste* as quickly as possible, adding more water if needed. Eat immediately with fresh milk.

LARYNGEAL PHTHISIS.

A CLINICAL LECTURE DELIVERED AT JEFFERSON MEDICAL COLLEGE HOSPITAL,

BY J. SOLIS COHEN, M.D.,

LECTURER ON CLINICAL MEDICINE AND ON LARYNGOSCOPY IN JEFFERSON MEDICAL SCHOOL.

(Reported for the MEDICAL RECORD.)

FOUR CASES OF THE DISEASE—ITS SYMPTOMS, PATHOLOGY, AND TREATMENT.

I INTEND to show you to-day a group of cases of laryngeal phthisis, a disease of much clinical interest, and to say a few words to you regarding its symptoms, its pathology, its prognosis, and its treatment. I want you to notice particularly the character of the voices of these men and this woman.

CASE I.—J. D., aged forty years, was entirely well up to within the last two years. He became hoarse gradually; at present he can only speak in a low whisper. Thinks his trouble dated primarily from an exposure to cold and vicissitudes of weather. His employment was that of a marble cutter, at which trade he had worked for a period of twenty-two years, when he was taken sick. (This is a case of the so-called *stone-cutter's* phthisis, for I have no doubt that the disease was first brought on by the inspiration of the marble dust.) The patient suffers from painful deglutition in the use of all solid articles of food.

CASE II.—J. C., nineteen years of age; has the same character of voice as Case I. Is a carpet-weaver by trade. He necessarily breathes in a great deal of dust when at work, and this dust has brought on the lung and laryngeal disease. He has been at this employment for five years. His present trouble first came on in March, 1878. He has no difficulty in swallowing.

CASE III.—H., twenty-two years of age, is in the cigar business. The man's trade, in this case, has evidently had nothing to do with the production of the disease. He has been sick since March, 1878. As far as I can gather, there is no family history of phthisis. He can still swallow everything, but has great pain and difficulty in the act. In Cases I. and II. the voice, though low, was rough; here it is merely muffled. Auscultation and percussion reveal a distinct cavity in the apex of the right lung.

CASE IV.—G., thirty-five years of age, is engaged in making neckties (this evidently affords us no clue to the origin of the disease); has been troubled with her throat since May, 1878, and has been decidedly hoarse since July of that same year. There is no history of consumption or of throat disease in her family. Has difficulty in swallowing, especially in swallowing *solids*.

THE SYMPTOMS AND PATHOLOGY OF LARYNGEAL PHTHISIS.

The prominent symptoms of this disease are progressive emaciation, change in the character of the voice, more or less difficulty in the act of deglutition, cough, and expectoration. The condition is what I should be safe in calling the chronic laryngitis of phthisis, since it is still a matter of much doubt as to whether there is any such thing as laryngeal phthisis independently of the disease of the lungs. As a general thing, there is found to be more or less disease of the lung tissue in all cases. The disease will be found to have attacked the same side in both the lungs and larynx. Possibly the disease may begin in the larynx. I have, however, never seen a case where there was not, at the same time, more or less implication of the

lung substance, and I believe that where we cannot determine upon the coexistence of lung disease it is only due to the fact that the disease in the lungs is not sufficiently advanced to be detected.

All the cases which I have just shown you are tuberculous. It is still a mooted question as to whether tubercles ever exist in the larynx. Some of the best authorities say that they do, while others, equally reliable, deny it altogether. I have never been able to detect tubercles in the larynx in a post-mortem dissection of the parts. It is possible that they may be there in an early stage of the disease, and that they slough off in later stages. I can now call to mind the case of a sailor who died after an illness of two weeks, and whose lungs, brain, and intestines were full of tubercles. The most careful search, however, failed to detect their presence in his larynx.

Virchow holds that tubercles may and do exist in the larynx, but are so superficial that they are very soon sloughed off and discharged.

Laryngeal phthisis is characterized by an inflammation of the mucous membrane and of great numbers of the follicular glands at the root of the epiglottis, and also in the ventricular bands and over the arytenoid cartilages. A group of glands is inflamed, disintegrates and ulcerates. The process of ulceration joins the glands together, and they are thus found to form a species of racemose ulcer—the so-called *phthisical* ulcer. This ulceration continuing and going deeper, involves the submucous tissues, the muscles, the perichondrium, and finally the cartilage itself, producing perichondritis, chondritis, caries, and finally necrosis.

When you see cases early in the disease, the *first* symptom which will call your attention to the true nature of the malady will be a peculiar pallor of the structures involved (some say that tubercles may be seen in the laryngeal image, but I have never yet been able to find them). The larynx is always pale in this disease. The pharynx is also likely to be pale. This pallor would seem to be only part of a general anæmia, but this anæmia is always seen first in the larynx. It may be present there while the patient is still rosy and healthy-looking. This pallor is pathognomonic of laryngeal phthisis. Sometimes the palatine folds will seem to the observer to be particularly red by contrast. In Case III. laryngoscopic examination gives a very good representation of granular or tubercular pharyngitis. The same is true in Case No. IV.

The *second* stage of the disease is one of thickening of the tissues, particularly of the ventricular bands and arytenoid cartilages. This thickening is the cause of the difficulty in deglutition. The larynx, you know, is in front of the œsophagus. The food is kept from falling into the larynx by the intervention of the epiglottis. When the parts are thickened and swollen, this action of the epiglottis cannot take place. Owing to this fact, the food, in some cases, in the later stages of the disease may even succeed in getting into the larynx, producing a distressing and violent cough. Then, too, one or other of the arytenoid cartilages may become tumefied. This condition also interferes with the entrance of the food into the œsophagus.

This peculiar swelling of the posterior parts of the larynx points almost conclusively to the existence of laryngeal phthisis. Taken in connection with other symptoms it is pathognomonic.

The *third* stage of the disease is that of ulceration. This ulceration first shows itself in the loose tissues between the arytenoid cartilages—the so-called arytenoid folds.

I must stop just here for a moment to refresh your knowledge of the anatomy of the larynx and adjacent parts. The vocal cords, as you well know, are attached to the posterior part of the arytenoid cartilages. There is a muscle running across between the arytenoid cartilages which pulls them and so pulls the vocal cords together. This muscle is brought into play when we speak and when it is consequently necessary that the vocal cords should be brought more or less closely together. This apposition of the vocal cords produces the slit through which the air passes to produce the voice. Of course, when the muscle to which I have just referred contracts and brings the vocal cords together, the neighboring mucous membrane is thrown into numerous folds which rub against each other, and when these folds are inflamed this constant attrition of their surfaces brings on ulceration. The ulcers thus formed try to heal, and so become covered with fungous granulations which are often mistaken for morbid growths, and the attempt not infrequently made to tear them away by the laryngeal forceps.

The hoarseness of the voice attending all these cases of laryngeal phthisis is explained by the fact that the vocal cords, when at all thickened, cannot reach the middle line, and hence are not properly adjusted for the production of the normal sounds of the voice. You see, therefore, that the hoarseness is not in any way connected with the ulceration, or brought on by it. The vocal cords may not be, indeed, in the least ulcerated, but they cannot be brought near enough together to produce sound. This fact is explanatory of the occasionally unexpected return of the power of voice without any betterment of the patient's general condition. The thickening of the vocal cords has so far subsided that the voice is no longer hoarse, but the disease has been all the while either progressing, or at least *in statuo quo*. The disappearance of the thickening of the cords is accounted for by the momentary absorption of the serum which had disabled the muscle and so prevented the apposition of the cords.

In some cases the inflammation will be found to have extended into the glandular portion of the larynx. Indeed, the inflammation may appear in any portion of the larynx.

Ulceration of the epiglottis is not common except in the last stages of the laryngeal disease. Some authorities hold that there is no such thing as ulceration of the epiglottis in this disease, but I am of the opinion that this latter statement is not founded upon fact. I think that ulceration of the epiglottis may occur towards the end of the regular course pursued by the disease. This clinical fact should always be borne well in mind, because, when the epiglottis is ulcerated, the case may resemble very closely one of syphilitic laryngitis.

The diagnosis between these two diseases is thus drawn. In syphilitic laryngitis the ulceration begins in the palate and pharynx and then affects the epiglottis, *i. e.*, it progresses from above downwards, while in the laryngitis of tubercular origin, the ulceration progresses from below upwards, attacking the posterior and lower part of the pharynx first.

In all cases where the disease in the larynx has advanced as far as the stage of ulceration, it will be found, upon examining the lungs carefully, that a cavity exists at some point in the lung substance. This clinical fact has led to the belief that the ulcerative process gradually extends from the lung cavity upwards to the larynx. This theory, in which I, among others, am a firm believer, was first advanced by the

great Louis, of France, who held that the ulceration, and, in fact, the first symptoms of the laryngitis, were produced by the expectoration of phthisical matter from the lungs and its irritating and infectious effect upon the upper air-tubes.

When the vocal cords are attacked by the ulcerative process, which is not a frequent occurrence by any means, there is usually more or less irregularity of the sides of the vocal opening—linear ulcers, in fact, rapidly form. The mucous membrane is attached but loosely to the vocal cords, since after death a probe can very easily be worked between this mucous membrane and the deeper structures.

When the arytenoid cartilages are swollen and thickened, there is usually already a condition of inflammation of the cartilage, or, at least, of its membranes, *i.e.*, of chondritis, or perichondritis. This leads to ossification, caries, necrosis, etc. Abscesses form and break. The cartilages which are most frequently affected are the arytenoid and the cricoid.

Here is a drawing of a specimen where an ulcer of the cricoid was present, a large portion of the tube is occupied, as you see, by the lateral half of the swollen cricoid.

At this stage of the disease, *i.e.*, when ulceration has taken place in the larynx, the patient is likely to suffer very great pain. There is always a greater or less amount of œdema of the parts, and all efforts at swallowing are followed by the escape of food into the larynx, causing spasm of the muscles. If the palate and pharynx are also involved, the spasmodic action of the muscles may drive the food into the nose and ears. The picture of the disease at this point in its progress is a very sad and serious one.

Ordinarily the evidence of laryngeal thickening may be found at any stage of the lung disease; but when the larynx and adjacent parts have gone on to ulceration, a cavity will always be found to exist at some point in the lungs, if the chest be carefully and thoroughly percussed and auscultated. During the early stages of pallor and inflammation, there may be no evidence of a pulmonary cavity.

Curiously enough, some of these associated cases of lung and throat disease last longer, *i.e.*, patients live longer, than in cases of pure, uncomplicated phthisis. Death from phthisis, on an average, occurs at a period of from eighteen months to four years from the inception of the disease, while the course of laryngeal phthisis is usually from four to seven years. The disease in the lungs would seem to be prolonged by the process in the larynx.

In these cases it is also possible to note the extraordinary fact that, if the laryngeal disease is relieved, the lung trouble grows worse, and *vice versa*. Sometimes the condition of throat and lungs grows worse simultaneously; sometimes they both get better.

The prognosis of the disease is always bad. Very few cases are cured. The majority of patients perish in from four to seven years.

THE TREATMENT OF LARYNGEAL PHTHISIS.

This brings me to a consideration of the proper treatment of the disease. Treatment is, of course, both local and constitutional. The constitutional treatment is the same as that for pulmonary consumption, and consists of fresh air, good food, freedom from anxiety, cod-liver oil, etc., etc. I need hardly dwell upon its minutiæ. Tonics and stimulants should at times be employed, as they become necessary.

A great deal can sometimes be accomplished by means of the local treatment; particularly is this true if the case come to you for treatment in an early stage of its progress. In some cases, indeed, a complete cure is possible.

The most important, and, at the same time, the first item of the local treatment, is to avoid all local irritation to the parts. If the patient be a stone-cutter or a carpet-weaver, you must insist upon it that he never return to his old occupation. So, too, if the patient be a public speaker, or be obliged to talk very loudly for any great length of time, as, for instance, to a deaf person.

After attending to this cardinal point, there are other matters of almost as great importance to be looked after. When there is a good deal of infiltration and swelling of the larynx, try to promote absorption. If absorption be not secured, and the swelling goes on, it will finally cut off the entire blood supply by choking the blood-vessels, and the parts will die and fall away.

After enjoining absolute silence, try local applications to the part by brush, by inhalation, or by the douche or spray. An excellent solution is formed by the following combination of concentrated carbolic acid and the compound tincture of iodine:

Acid carb. concent.	f ʒ j.
Tr. iod. comp.	f ʒ ij.
Aquæ q. s. ad.	f ℥ iij.
M.	

Signe, f ʒ j. three or four times daily by spray or inhalation.

The advantages of the spray are manifold. In the first place, the water cleanses. It is very important that the secretions should be cleared away from the ulcerated surface; otherwise, they will cling to it, decompose and poison the blood. The second advantage of the spray is a mechanical one. The impact of the water on the part, as it is propelled with some violence in the spray, has a much more salubrious effect than when it is simply allowed to run over the surface. It stimulates, perhaps, by its impact, the sluggish capillary circulation.

Then, too, the iodine is an absorbent, and the carbolic acid a disinfectant and an astringent.

When the ulceration begins, you should use more powerful applications. Here the spray is still useful, for the part should be cleansed at all times before any local application is made. Be cautious, however, after employing the spray, that you do not use any irritating substance. The inclination of an ulcerating surface is not to heal, and an irritant, of course, throws a further obstacle in the way of healing.

Where there are irregular excrescences on the larynx or vocal cords, produced by the ulceration, they should, as a general rule, be allowed to remain, unless they have grown to such a size as to interfere with respiration. If the arytenoid cartilage becomes ulcerated, the demand is for a soothing application, such as a weak solution of aconite in glycerine, or a weak solution of morphia and belladonna. The chloride of zinc, in the form of a weak solution, is an excellent application. The action of this remedy is limited to the points of ulceration. That astringent substance should always be employed which does the least damage to the tissues surrounding the ulcer. The chloride of zinc should be employed in a solution of one part to fifty, or even one hundred.

In the later stages of laryngeal phthisis the nitrate of silver does good; but it must be used without the expectation of its curing. This substance, as it is well known, forms a coating of coagulated albumen over the ulcerated tissue, and so protects it from the air and from the irritation of food. The solution of ni-

trate of silver should have a strength of from forty to sixty grains to the ounce. It should be applied only to the ulcers at the margin of the larynx, and not to those in its interior.

Where the swelling of the parts interferes with respiration, and suffocation is threatened, tracheotomy may be necessary for the prolongation of life. I do not believe that it can, by any means, effect a cure, but still cases are on record where the patient has lived for years after the operation, and where the throat had so far recovered that the canula could be removed, and the artificial opening be allowed to heal.

Original Communications.

ON RADICAL TREATMENT OF LOCAL DISEASE AT THE MENOPAUSE.

By G. E. SUSSDORFF, M.D.,

NEW YORK.

(A Paper read before the N. Y. Academy of Medicine, Nov. 7, 1878.)

Part II.

Having thus far endeavored to make out the importance of this epoch as a critical event, to show its true value as a benign and curative influence, and having considered its dangerous tendencies and fatal terminations, it now remains to take up the subject of treatment, which, from the standpoint here made, is of interest chiefly in respect to disease located in the reproductive organs.

It is also a subject of great interest in relation to the *general* pathological conditions of the period, but that part of the question cannot be considered except in a general way. Unquestionably the first indication of treatment at the menopause is the *cure of local disease.* After this in importance are measures for husbanding and building up the vital forces of the system, and for counteracting excessive nervous action.

The radical treatment of local diseases is of paramount importance, because but few of them are amenable to special constitutional measures of relief. The term *radical* is intended to include all measures of a positive or active character, but specially refers to surgical interference.

The question of treatment might with great propriety be considered under two heads: 1st. The advisability of such interference during the epoch; and 2d. The advantages to be gained by such measures in anticipation of the approaching event.

Women, however, are usually reserved about their sensations shortly before the change of life; they are perhaps more inclined to hide their fears and sufferings than to make them known, and thus it often happens that medical advice is not sought until the "evil consequences of neglect are made alarmingly apparent" by the determining influence of this epoch. The second part of the subject, therefore, is of great interest, and should be made the special study of a separate treatise.

It should be remembered, with regard to cancer, that it is often a disease of constitutional vice, and that when interference is desirable, no matter what be the age of the patient, radical treatment should not long be delayed. When, therefore, this disease occurs prior to the menopause, appropriate treatment should at once be instituted, since better results may then be expected than if longer delayed.

If, however, the disease is first discovered at the menopause, radical treatment may still be appropriate and fair results hoped for, unless its progress has been so great that a fatal ending is a foregone conclusion.

In other diseases than cancer which assume malignant characters, the question of radical treatment should depend for its solution upon the chances for and against recovery from the immediate effects of treatment, and *not* upon the probabilities of a recurrence of the disease.

The immediate dangers of surgical measures at all periods of life are from excessive inflammatory reaction and exhaustion.

There are good reasons for believing that the dangers from radical interference at this period have been unwarrantably exaggerated, and that the reluctance to operate for conditions analogous to those which occur in earlier life—about which no such reluctance is felt—has no real foundation in fact.

In forming an estimate of the likelihood of immediate danger from treatment, the following table by Dr. Tilt will be of some assistance, as it represents the rates of mortality from ovariotomy at different ages, and is an analysis of 292 cases by Spencer Wells:

Rates of mortality.	Averages.	Cases.
General averages of mortality at all ages.....	28.33	300
Average mortality in women under 40.....	31.64	158
" " " from 40 to 60.....	28.35	134
" " " " 40 to 50 inclu..	28.39	81
" " " " 50 to 62.....	30.76	52

It is here shown that the dangers of ovariotomy are *not greater* during the menopause than at other times, and an analysis of eight hundred cases published by the same operator up to 1878 also shows that the rate of mortality is not greater between forty and fifty than at other periods, excepting very early and very late in life, when it is rarely undertaken.

There is perhaps no more formidable operation known in surgery than this one, and the above facts may be accepted as going a long way towards settling the question of the dangers of ovariotomy in particular, and of the susceptibility of the system to inflammatory reaction and exhaustion from other and minor operations at this period.

It is true that the natural state of the system is then one of depression, but it is minor in degree, and is consequent upon the withdrawal of the stimulating influence of ovulation. When, however, the depression becomes *intense*, it usually depends upon special abnormal influences which exist as causes in addition to the loss of ovarian stimulation, which hold in abeyance vital energy, and life-force, which is present, but latent and oppressed. This is proved by the sequence, since it is a matter of common observation that, when this crisis has been happily passed, women may be said to enjoy "a new lease of life."

As already stated, there are many prejudices existing respecting this period, but the most general and deeply grounded of all is the belief that local and constitutional diseases incident to it are synonymous with those of old age. This misconception of the true nature of these diseases, together with the almost universal belief in the dangers of interference, has led to the practice of what may be called an expectant plan of treatment, which hopes all things, and scarcely ventures beyond the administration of medicines inoperative except upon the imagination.

While it is not designed to underrate the actual in-

fluence of this epoch for good, or overlook the fact that many women pass through the crisis without inconvenience, the other fact still remains, that it is, in a very large number of instances, a period of suffering, danger, and not unfrequently the cause of death.

A lowered state of the vital forces may determine malignant characters in diseases previously benign, which in their turn intensify the general depression and aggravate excessive nervous action, these "morbid exaggerations," which constitute, in a great measure, the general diseases, and the special pathological conditions which constitute local diseases, are to a great extent interdependent and react harmfully one upon the other.

As general measures of treatment, therefore, the importance of husbanding and strengthening the vital forces, and controlling excessive nervous action, should not be overlooked. Exhausting discharges, floodings, leucorrhœa, diarrhœa and hemorrhoids, vomiting, dyspepsia, debility, plethora and chlorosis, ganglionic paralysis, and other morbid manifestations, should receive appropriate treatment, and every advantage, therapeutical and hygienical, given, to build up and strengthen the system against constitutional weaknesses.

Instead, therefore, of regarding the menopause with indifference and pursuing an expectant plan of management, it should be our duty to bring intelligent investigation and sound judgment to bear in diagnosing these cases, and when a cause of peril is discovered, to institute prompt and radical measures of relief.

The details of special medication or of particular operations most appropriate to the various morbid manifestations peculiar to this epoch will not be attempted, as treatment must be based upon general principles; but enough has been said respecting their nature and tendencies to at least indicate the class of remedies that should be selected as most likely to be of advantage.

To return, therefore, to the main premises of these considerations, an attempt will be made to illustrate, as well as possible, with a few cases, 1st, the evil consequences of the neglect of appropriate measures of treatment, and *per contra*, the great advantages to be gained by the adoption of *radical measures* of relief.

Mrs. Jane M. W., aged fifty, and a widow for eighteen years, came under my care during the past summer. She was of sanguine temperament and quite stout, weighing about two hundred and twenty-five pounds. I found her suffering from the consequences of metrorrhagia, or more correctly speaking, at the time of my visit, from the immediate effects of flooding. She gave the following history of her case: Three years before this, her menses began to show signs of irregularity; at first the flow was excessive and frequent, and at later times varied much in respect to time and quantity. At the end of about two and a half years it ceased, and she supposed this to be the last of it. For some time before the flow ceased she had experienced much inconvenience from nervous irritability and depression of spirits, and these symptoms continued and increased considerably in degree during the six months following after the last appearance of the menses. Her appetite and digestion now became poor, and flushes and perspirations frequent and distressing. Her general health had in previous years been good, had suffered from no uterine trouble as far as she could recollect, except at the birth of her last child twenty years before, when there had been some local trouble.

She had always led an active though somewhat luxurious life, but during the last few years had gradually lost her self-reliance, and at last became unfitted to attend to the ordinary duties of her every-day life.

She had never had an illness of any kind, until the last few years, when she sought medical advice for certain nervous troubles and for a profuse and irritating leucorrhœa. At the end of six months the flow of blood again returned, and this continued at irregular intervals and in varying amount for three months, until, the day before I saw her, it had culminated in a sudden and profuse hemorrhage. This lasted but a few moments, and then spontaneously ceased, but on the following morning the flow recurred again.

At this time, also, the cephalalgia which had previously given her great trouble, came on again in an intense form, to which was added nausea and great prostration of strength.

At my first visit, the usual remedies, constitutional and local, were ordered, and controlled the symptoms at the time, and afterward, for a day or two, whenever they came on.

Very soon another flooding came on, which was with difficulty controlled. Various attempts had been made previous to this to make a thorough vaginal examination, but were not successful, because of the extreme sensitiveness of the parts, which was so great, that even the introduction of pieces of ice were painful; but an examination was now permitted. On introducing the finger into the vagina, it soon came in contact with the cervix, which was hard, nodulated, and so large as to fill up the vagina at the point of its location; the body of the womb, however, as well as could be ascertained, was but slightly enlarged. An examination by speculum confirmed the signs gained by touch, and showed several ulcerated spots upon the cervical enlargements—and the blood passing from the cervical canal; but, as far as could be seen, there was no oozing from the tissues of the cervix. Pledgets of cotton saturated with a solution of persulphate of iron were placed over the cervix, and this controlled the bleeding for thirty-six hours, but it came on again at the end of that time.

The cotton was removed, and about one drachm of a strong solution of persulphate of iron was injected with a long-nozzle syringe against the mouth of the cervix, a few drops, perhaps, entering the canal. The hemorrhage, after this, seemed to have ceased, excepting a slight showing of blood, which still continued. The nausea and vomiting, which before had been bad enough, now became excessive, so that she could retain nothing whatever upon her stomach, medicines and nourishment being given hypodermically and per rectum.

At this time the weather became exceedingly hot, and continued so for a week. Simultaneously with the accession of the high temperature, great exhaustion came on, with symptoms of septicæmia, after which consciousness was lost, and death took place at the end of four days.

An autopsy was not permitted, and therefore the special pathological characters of the cervical disease were not ascertained. How long the local disease had existed, I could not learn, but believe it began to assume malignant features during the first year of menstrual irregularity. At the time the disease was recognized, the constitution of the patient had become thoroughly undermined, and this, together with the extreme heat of the weather, forbade radical measures of relief. This case is a fair illustration of the consequences of neglect. The patient had paid no especial attention to her earlier symptoms, believing they

should be attributed to the change of life, and therefore of no consequence.

The next case is that of Sarah I., a colored woman, 50 years of age, married, and the mother of several children. The history is as follows:

She began to menstruate quite early, and this continued regularly, except during pregnancy, until about the forty-fifth year, when she first noticed irregularity. An enlargement of the uterus had been present, she thought, for about six or eight years, but until the last three years it had given her no trouble. About her forty-eighth year, the menses ceased, and at this time she became conscious that the tumor was enlarging, and was much annoyed by violent bearing-down pains, or cramps, as she called them. She also frequently suffered from exacerbations of fever at that time, but could not learn its type. These symptoms continued about the same to within a few months before I saw her, when the flow of blood again appeared, at first intermittently, and afterward continuously. Upon examination, a submucous fibroid was discovered in the body of the uterus about the size of an orange.

The operation of incision was advised, but was not accepted. About this time, 1876, I gave up the case, owing to removal, but have since learned that, after lingering for a short time longer, she finally died of exhaustion.

She had been a woman of robust constitution, and was a favorable case for that operation; but she refused such treatment from prejudice and the mistaken advice of other persons. In this instance the fibroid had remained quiescent for several years without giving trouble, and in no way injuring her general health; but when the change of life began, the tumor became excited into activity, continued to increase, and after cessation, took on malignant characters. Other cases might be cited, but these must suffice to show the unfavorable influence of the menopause, and the malignant character which benign disease may assume when left to pursue an uninterrupted course.

The advantage to be gained by the observation of radical measures of treatment may, perhaps, be estimated by the succeeding cases, which will be given as briefly as possible.

I have given an account of the following case elsewhere—where it was considered only in respect to a question of differential diagnosis; but being a convenient and good illustration of the entire matter in hand, it may not be inappropriately referred to here.

This is the case:

Mrs. S. P., a tall, thin brunette, forty-nine years of age, and a widow for some years, was the mother of several children, the last of which she had borne twenty years before. She had never had an abortion, and had usually enjoyed good health, with the exception of occasional attacks of dyspepsia and intermittent fever.

Her menses first appeared at the age of fifteen, and until the beginning of her present sickness she never had, as far as she could recollect, any uterine trouble.

According to her statement, her present illness began some two years before, and was brought on suddenly from having attempted to lift some heavy article of furniture. She was immediately attacked with hemorrhage from the vagina, pain in the loins and back, weight and dragging in the pelvis, nausea and great prostration — in short, by such symptoms as usually accompany a sudden displacement of some portion of the pelvic viscera.

She was compelled to take to her bed at once, and her family physician, who attended her, pronounced her case to be a form of uterine displacement, the exact nature of which I could not ascertain from her. Neither could I learn what treatment had been employed other than that she had been kept in bed for three weeks, and that pessaries had been worn for some time after. At the end of a month the acute symptoms had subsided, and soon after she was sufficiently recovered to attend to the ordinary duties of her household.

Her general health had received a severe shock, and nervous symptoms soon came on, such as severe and continued headache and great irritability of temper. The menses, which previous to the attack had been regular, sufficient in amount, and without pain, had now become irregular, in respect to both time and quantity, and were always painful. There had been a considerable sanguino-purulent discharge at the beginning of her attack, which continued as a thin, irritating leucorrhœa.

There had been considerable difficulty in defecation and some dysuria, until the pessaries which she had worn successively were abandoned, and all efforts at supporting treatment were discontinued.

At the end of six months her general condition had not improved.

It seems at this time her physician told her that she was passing through the climacteric period or change of life, and counselled her to be patient and endure her ills with as much fortitude as she could command, in hope of permanent relief when cessation should come. As a consequence of this advice, and from a mistaken impression on her part, and that of her friends, that no good would result from active medical treatment under such conditions, she received but little attention for months. Cessation did not come, and despairing of relief from natural causes, (?) she again sought medical advice. At this time, some two months before I saw her, the menstrual periods had ceased to be distinct, the flow had become continuous. She was examined, and her case this time pronounced prolapsus uteri. The prolapsus, she was told, had then been reduced.

In spite of the reduction and constitutional treatment, such as large doses of tinct. ferri chlor., tinct. cannabis indicæ, gallic acid, etc., and tonic treatment in general, the flow continued and her debility increased.

To such an extent had this state of affairs reduced her, that she presented, at my first visit, an almost exsanguinated appearance, and was so weak as scarcely to be able to move from her chair to the bed.

A careful investigation proved the cause of trouble to be a large hollow polypus of the womb, and although the discharge of sanguino-purulent matter and continued hemorrhage had induced great exhaustion, no inflammatory reaction or other evil consequences occurred after the operation removing the polypus, and the patient quickly recovered her strength, and gained an extraordinary degree of health.

We have in this case both an example of the dangers of a blind faith in the curative influence of the menopause, and an instance of the good effects of radical measures of treatment.

Thus far organic diseases of the uterus only have been cited, but other organs are likewise subject to the influence of this epoch. Among these the mammæ are next most frequently affected, and the last case will be considered in that connection.

Mrs. Evalina K., a widow, 48 years of age, and the mother of several children, came under my care in the

spring of 1876. An account of the case, up to that time, is as follows:

Fifteen years before, while in the enjoyment of usual health, she discovered a tumor about the size of a pea in her right breast, and, as I take it, clear of the mammary gland, and situated to the outer and under part of the breast. It gave her no pain, and she paid no attention to it for five years, but about that time it became painful, and she noticed that it was growing larger. During the next three years, its growth was very slow, and in 1870 it had become as large as a walnut, and occasionally gave her much discomfort.

In 1872, instead of being smooth and round, it seemed to have increased by the addition of other growths immediately upon the surface, which gave a feeling of lumpiness to the touch. The tumor soon became the size of a large orange, and the pain at times was of a lancinating character, and at others like a throbbing toothache. She now became thoroughly alarmed, and sought medical advice. She was told that the disease was cancerous, and if removed would probably return again. For this and other reasons, it was allowed to remain undisturbed. This state of affairs remained pretty much the same until the latter part of 1873, when it took an increased activity, and grew rapidly. Her menses, which began early in life, had during the previous eighteen months been very irregular, and at this time ceased. She was then in her forty-fifth year, and it proved her final menstruation. After this for two years it continued to grow, by the development of other bodies which seemed to spring from the surface, and in the winter of 1875 had reached the dimensions of an adult head. The pain in the part was severe, and her strength and health began to give way. In the spring of 1876, the integuments, which thus far had remained intact, began to ulcerate at the part where the tumor was first discovered, and within a month had become deep, as large as a man's hand, and was discharging very offensive matter. Her condition was now truly deplorable; she was weak and emaciated from the constant drain upon her system, by the discharges from the tumor and from a diarrhœa which had recently come on, and it was evident she could not long survive this condition, particularly in view of the approaching semi-tropical summer. Having instituted a careful examination of the tumor, of her constitution, and family history, for signs and evidences of cancer, and finding nothing specific, it was diagnosed a malignant non-cancerous growth.

A few days after, on May 17th, the tumor was removed, and within three weeks the parts were entirely healed. The patient made a rapid recovery, and when I again saw her, nineteen months later, she was in the enjoyment of good health. Ten months more have now passed—in all, twenty-nine months—and when last heard from, a few months since, she was still in sound health, with no signs of return of the disease, at its original seat or elsewhere in the body.

A study of the pathological characters of this tumor would perhaps be instructive, but it must suffice here to state that none of the specific signs of cancer were found, and that it belonged to that class of growths considered benign, and denominated fibro-cystic. An idea of the solid nature of the tumor may be formed from the fact that it weighed, after all fluid had been drained off, six pounds fourteen ounces avordupois.

This case is an unquestionable illustration of the influence of the menopause in causing malignant development in a previously innocent growth. It shows the necessity of careful inquiry into diseases occurring in such parts, and proves that vital energy and life-force, under such circumstances, is not lost, but only latent and oppressed.

Other cases should perhaps be added, to show more conclusively that the dangers of inflammation and exhaustion have been exaggerated, and to prove the value of radical measures of treatment, but these are sufficient, I trust, to make clear the main points of these considerations. In view of the length of this paper, the following conclusions are offered:

1. That the time of the menopause, as regards the inception and aggravation of disease, is at least of equal importance with that of puberty, or any other epoch of life.

2. That while, as a rule, the majority of functional and organic diseases of the female generative organs, decrease in intensity subsequent to the menopause, still there are a very considerable proportion of cases in which the opposite takes place, even to the extent of benign diseases becoming malignant.

3. That in a good many instances these latter cases do not necessarily present decided local symptoms of the actual pathological conditions present, but are indicated by general signs, which usually attract attention, chiefly because occurring at that particular time of life.

4. That in no case of general or local disorder, occurring just prior to or during the menopause, should a local examination be omitted, which will frequently reveal at a glance the origin of the hitherto inexplicable phenomena, and also indicate the therapeusis.

5. That such therapeutical measures should be radical and effective, quite regardless of this particular time of life, the dangers of operating during which have undoubtedly been exaggerated.

I am fully conscious of many omissions in these considerations, but will feel satisfied if I shall succeed in recalling attention to the importance of the menopause as a critical event, and to the frequently great advantages of radical measures of treatment in local disease.

Reports of Hospitals.

PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK, AND HOSPITAL DEPARTMENT OF COLORED HOME, NEW YORK.

FOUR CASES OF LUMBO-COLOTOMY.

SERVICE OF DR. CHARLES K. BRIDDON.

THE operations of Volckmann and others have given an impulse to the surgery of the rectum that would seem only to be limited by the extent of that portion of the alimentary canal to which the term applies. Indeed the Germans have not restricted themselves to the terminal division, but have attacked, through abdominal incision, the colon itself.

Thiersch and Schede have both made resections of the large intestine; and Gussenbauer, of Lüttich, has also resected the colon descendens. It is doubtful if they have found any imitators in Great Britain; at all events we have no reports of such operations; and Curling, who may be regarded as the exponent of opinion amongst English surgeons, limits excision to cases of epithelial cancer invading the anus and its

immediate neighborhood, and remarks, in his last edition of Diseases of the Rectum: "I am unwilling to discourage any attempts to cure or relieve so dire a disease as cancer of the rectum by excision; but knowing the danger which must be incurred from hemorrhage in the operation, the misery likely to ensue from incontinency of fæces and from contraction in the wound, if healing takes place, as well as the prospect of an early return of the disease, I cannot think that the chance even of a prolongation of life is worth acceptance on the terms offered by such an operation, and I hold that much more is to be gained, with less risk to life, by another proceeding, viz., lumbar-colotomy, which is applicable also to cases in which excision would be impossible."

The class of cases in which extirpation must be rejected are numerous; carcinoma, where the disease has passed beyond the limits of the knife; stenosis from cicatrization of chancroids, and alterations produced by the later manifestations of syphilis, in such when the obstruction has failed to yield to the patient application of mechanical dilatation, assisted, if needs be, by single or multiple incision, we are only able to mitigate the suffering, and retard the progress of the disease by the establishment of an outlet above the obstruction. The operation of lumbo-colotomy has secured its claims as a proper proceeding in the class of cases referred to, and we give the details of four cases occurring in the Presbyterian Hospital and in the hospital department of the Colored Home.

Case I.—Reported by Dr. W. H. Gerrish.—Hannah Holdsworth, æt. 28, native of Germany, married, actress, was admitted to the Presbyterian Hospital in the city of New York—service of Dr. Charles K. Bridon—July 31, 1876.

Previous history.—Mother died of carcinoma uteri; father's history unknown; began to menstruate at thirteen years; married four years; had an attack of acute rheumatism three years ago. Her present illness began two years ago with constipation, which gradually increased, and was accompanied with tenesmus, severe bearing-down pains, and muco-purulent discharge.

Present condition.—Patient is anæmic and emaciated, has very frequent desire to evacuate the contents of the rectum, pains in the sacrum, radiating down the thighs and into the vulva; she is also tormented with vesical tenesmus; has a considerable discharge of blood and pus from the bowels. Examination with the finger reveals a tight annular constriction one and a half inches above the sphincter, which barely admitted the point of the little finger; mucous membrane below the occlusion ulcerated, and the recto-vaginal septum considerably thickened.

Treatment consisted in the use of demulcent and anodyne injections, and dilatation by conical bougies; these means were continued for six weeks, but were interrupted by the frequent formation of vulvar abscesses, which degenerated into fistulous tracks.

In September the operation of rectotomy was performed, and a large-sized bougie was introduced. In the performance of this operation a large post-rectal abscess was opened, and the relief afforded by giving free vent to this was marked. Bougies were steadily used until near the end of the month, when she had a severe attack of acute rheumatism, and her sufferings at that time were of so grave a character that local treatment had to be discontinued. When she had recovered from this complication, the stricture was found as before the operation; the evidences of dilatation and ulceration of the bowels above the constriction were unmistakable—constant discharge of blood and pus, and escape of flatus through the labial fistulæ; the tenesmus had increased in severity, and she only procured a few hours' sleep at night when under the influence of large doses of morphia; she also had a more or less constant elevation of temperature, ranging in the evening sometimes as high as 104°.

December 11th.—Lumbo-colotomy was performed by transverse incision, between lower rib and crest of ilium, centre of incision being half an inch behind centre of crest of ilium.

The relief afforded in this case was of a most satisfactory character; for a time she was troubled by fæces entering the canal below the artificial opening, and the discharge of pus from the anus persisted. This, however, was treated by washing out the lower colon every day, and it soon ceased to be a source of annoyance. She had very good control over her evacuations, wearing nothing but a pad of folded cloth, supported by an abdominal belt, and she was discharged cured and in robust health on the 9th of February.

Six months after this patient presented herself for examination. She is entirely free from all her old ailments; labial sinuses are healed. Stricture in rectum is dilated so as to admit the index-finger with ease; her appearance is that of a healthy woman; on introducing a finger into the artificial anus it is distinctly grasped as by a sphincter, and at the lower margin of the outlet was accidentally discovered an opening leading into the distal extremity of the gut; but it was effectually cut off from the canal above by a valve-like covering of mucous membrane.

Case II.—Reported by Dr. W. H. Gerrish, Sen. Assistant Surgeon Presbyterian Hospital in the City of New York.—Kate O'Gorman, æt. 30, native of Ireland, admitted Oct. 21, 1878. Patient is a married woman, of fine physique, though she has lost forty-eight pounds during the past three months. She is the mother of five children. She relates a history of two members of her family having succumbed to phthisis, but is not aware of any having suffered from cancer. Last April she began to suffer from backache; the pain centred in the sacrum became continuous, increased in severity, and after a time radiated in various directions. It became so severe at last that she became worn out from loss of sleep. It was of a burning, lancinating character, and was not assuaged by any of the various means used for that purpose. Three months ago she first noticed a discharge, which has gone on increasing up to the present time—at first purulent, subsequently it became mixed with blood, and now is an ichorous offensive discharge, considerable in quantity, and so acrid in character as to chafe adjacent parts.

The finger introduced into the rectum finds evidence of very extensive disease; at a short distance from the anus the walls are indurated, ulcerated, irregularly nodose; below there is no contraction, but as the finger passes upwards the calibre diminishes until, at a distance of about five inches, a point is reached that will not admit the point of the index; the gut is fixed more especially anteriorly, where the vaginal portion of the septum is involved; the cul-de-sac of Douglass is contracted and appears with the post-lip of the uterus to be drawn to a common centre, situate at the junction of the uterus vagina and rectum. All these parts appear to be incorporated with the infiltration that pervades the part and fixes its position.

Diagnosis is undoubtedly carcinoma. The patient was sent in for the purpose of being submitted to an operation for extirpation, but the disease has advanced so far as to render that impracticable, and the estab-

lishment of an artificial opening in the loin was considered to be the means most likely to retard the growth of the disease and afford some relief to the state of constant suffering.

After preliminary clearing of the bowels, and whilst under the influence of ether, the operation of lumbo-colotomy was done by Dr. Briddon on the 26th. An extreme deposit of fat rendered it somewhat difficult to define the superficial landmarks with accuracy; but a point was determined, half an inch behind the centre of the crest of the ilium, and marked by the introduction of a black pin through a small fold of skin; a transverse incision was made, five inches in length, between the last rib and the crest, the centre of which was opposite the pin. This was carried through a considerable thickness of fat down to the lumbar fascia. On division of this stricture, the erector spinæ, quadratus lumborum, and muscles forming the abdominal wall came into view; these latter were divided to the extent of an inch, an incision was made into the deep abdominal fascia, when a portion of the fat which forms the bed in which the intestine lies bulged into the wound; this was in such excess as to cause some delay, and, in fact, it was necessary to dissect some of it away. On inflating through the anus with atmospheric air, the gut rose through the wound, presenting its longitudinal bands with unusual distinctness, it was transfixed with ligatures, which were united to the adjacent integument. The gut was opened by a vertical incision about an inch in length, and was accurately adjusted by a number of fine sutures.

The result in this case was extremely gratifying; in nearly the whole extent of the wound healing took place "per proniam intentionem." The patient was at once relieved of the severe and continuous backache. On the third day after the operation she had a well-formed stool, and subsequently she had one or two every day, and has enough control to enable her to retain the contents of the bowels fifteen or twenty minutes after the desire to evacuate first expresses itself; and she was discharged, twenty days after the operation, entirely relieved of pain and with wound soundly healed.

CASE III.—Reported by Dr. W. H. Gerrish, Sen. Asst. Surg. to Presbyterian Hospital in the City of New York.—Mary I. Wright, æt. 25, native of Rhode Island, married, housewife—admitted to service of Dr. Charles K. Briddon, Nov. 4, 1878.

Family History.—Father and mother both died when young, the former of phthisis. She lost one sister, who died after an attack of apoplexy.

Previous History.—Patient has always been delicate; when young had scrofulous swellings of the neck, and has been subject to coughs, colds, and pleuritic affections. After the premature birth of a child, twelve years ago, she first began to be troubled with constipation, which gradually increased in severity, until at last each action of the bowels was associated with violent tenseness, and followed by long-persistent aching pain. Four years ago she was examined by a physician, and pronounced to have stricture of the rectum.

Eleven months ago she was confined at term; labor was very tedious, and was terminated by application of the forceps; in the delivery of this child the perineum was ruptured through into the rectum. Her condition now was very distressing. She had complete incontinence of fæces, and an operation done for restoration of the perineum failed entirely.

Present condition is truly deplorable; patient looks like a woman worn out with suffering; she is anæmic, but not very much emaciated; her buttocks are smeared with fæces, which the most frequent cleansing will not prevent; she has no perineum, and a tight constriction, two inches up the rectum, through which it is impossible to introduce an instrument.

She was advised to submit to the operation for establishment of an artificial anus in the loin. She joyfully accepted anything at all likely to ameliorate her very disgusting infirmity, and the operation was performed on the ninth day of November. Patient rallied well; had a comfortable night; on the second day she had a small discharge from the lower bowel, and a muco-purulent discharge from the new outlet; third day the fine sutures were removed, perfect union having taken place at all points. This union was subsequently partly broken up by a small abscess which formed in the deeper recesses of the wound, but it scarcely interfered with the recovery of the patient, which was prompt and complete. She has very considerable control over the evacuations, which amount to two or three a day, and she can retain them about five minutes after the desire is felt.

CASE IV. was reported in Proceedings of New York Pathological Society, MED. RECORD, 497, by Dr. F. E. Russell, House Physician to the Colored Home.

Patient entered that institution (service of Dr. Briddon) August 5, 1878. She was thirty years old, brown skinned, a widow, with four children, and was saturated with syphilis. She had suffered for some time with the usual symptoms of stricture of the rectum; her perineum was riddled with fistulæ; the lower end of the gut was ulcerated; and two and a half inches above the anus was a stricture which just admitted the point of the index-finger.

After admission she had several dangerous attacks of obstruction, and it was considered best to make an outlet in the left loin.

Operation of lumbo-colotomy was performed Oct. 24th, in the presence of Prof. Alf. C. Post, Drs. Joseph W. Howe, Geo. F. Shrady, and others, and nothing unusual was observed during the operation—in fact, it was remarked that it was unusually free from hitches of any kind.

The first thing that was remarked afterwards was that the discharges from the opening were not at all formed, but thin and irritating—so much so, that the integuments around the wound were red and raw. About the sixth day symptoms of asthenia began to develop, and the patient died on the eleventh day.

At the autopsy made by Dr. Russell, a loop of small intestine, six and a half feet, from the pyloric extremity of the stomach, was found united to the external wound; the descending colon, from the splenic flexure to its termination in the rectum, was found contracted to about the size of the index-finger. Above the flexure it was dilated; it was entirely under cover of the quadratus lumborum muscle, lying within its external border.

The specimen presented to the Society proved that, at the time the deep lumbar fascia was incised, the peritoneum had bulged into the wound like a hernial sac, with a loop of intestine within it. At the moment it presented, of course it was covered by its proper investment, the subserous areolar tissue, and it resembled the posterior wall of the colon so closely that no one had the slightest suspicion that it was anything else.

QUINIA TO PREVENT SURGICAL SHOCK.—Dr. Hunter Maguire, of Richmond, Va., and one of the editors of the *Ohio Medical and Surgical Reporter*, have tried the effects of quinine to cinchonism in warding off shock in surgical operations, and thus far with success.

Progress of Medical Science.

THE SENILE CHANGES IN THE JOINTS AND THEIR CONNECTION WITH ARTHRITIS DEFORMANS. — Dr. Weichselbaum has had opportunities of studying senile changes in the joints in a very large number of cases (nearly 1,000), and he embodies the results of his studies in a paper with the above title. In normal joints he has always been able, by means of different methods of examination. to demonstrate the existence of an endothelium on the inner surface of the synovialis. At the borders of the synovial membrane angular cells, provided with processes, are found which gradually pass over into cartilage cells. He discards the silver method because of its uncertainty. He agrees with previous observers in the opinion that the basement substance of the articular cartilage is composed of exceedingly delicate fibres bound together so closely by a cement substance that they give the optical impression of a homogeneous and structureless tissue.

The senile changes affect all the constituents of the joints. The grosser changes of the cartilages are fibrillation and the formation of fissures, with the consequent development of defects (ulcers, abrasions); also atrophy and alteration of the color to a gray or grayish yellow. The ulcers may heal at any stage, being filled up either by a cartilage-like tissue or by proliferations from the synovial membrane, or from the connective tissue of the Haversian canals. The changes in the synovial membrane are either of a progressive or a regressive nature: to the former belong growth of the cells in the proliferating zone and increase of the synovial folds; to the latter, fibrillation of the membrane and of the subjacent capsule, ligaments, and tendons. Histologically, the fibrillation of the cartilages is characterized in the first stage by the appearance of lines of cleavage, due to destruction of the cement substance, whereupon the cartilage cells begin to proliferate. This process may also begin in the deeper parts of the cartilage. The resorption of cartilage is brought about, like that of bones, through the agency of young, sometimes polinuclear cells, provided with processes, which are developed from the proliferation-cells of the synovialis, and to which Dr. Weichselbaum gives the name "chondroclasts." Even in youthful individuals the borders of the cartilage under physiological conditions are resorbed by these chondroclasts, to be subsequently entirely or partially replaced by newly-formed cartilage. The senile changes of the cells of the cartilage consist in fatty and amyloid degeneration, and a deposit of the phosphate and carbonate of lime in them. This deposit also occurs in the matrix. Among the senile changes of the synovialis and fibrous parts of the joint, the author lays special stress on the growth of the proliferation-cells, the amyloid degeneration of the cells and the matrix, the increase in the number of the synovial folds, the fatty degeneration of the endothelial cells, etc. The changes in the bony parts of the joint consist in regressive atrophy of the osseous tissue, and progressive processes of growth in the medulla and periosteum, with or without consecutive new growth of bone.

In conclusion, Dr. Weichselbaum maintains that there is an intimate connection between the senile changes of the joints and arthritis deformans, the latter presenting merely a more advanced grade of the former. In the poliarticular arthritis deformans the proliferating processes in the synovialis, the development of chondroclasts, and the resorption of the cartilage dependent thereon predominate, while in the monoarticular form the other senile changes (fibrillation of the cartilage and fibrous parts of the joint, new growths of cartilaginous and bony tissue on the borders of the articular surfaces and in the capsule, combined with atrophy of the cartilage and bone in other parts) take the upper hand.—*Allg. Med. Cent. Zeit.*, No. 39, 1878.

BALSAMUM ANTARTHRITICUM INDICUM.—Dr. von Hölder, of Stuttgart, reports the results of his experiments with this substance, which is the juice of a tropical tree probably belonging to the leguminous family. The natives of the countries where the tree is indigenous, obtain the juice by boring holes in the larger branches. They employ it by inunction over the entire body, to harden the skin against the injurious action of dampness and of sudden changes in temperature, and also to relieve rheumatic pains. The juice is of the consistency of syrup, is cloudy, of a light-brown color, and has a peculiar, offensive odor, which becomes more marked during friction. It contains a good deal of gum, which can be removed by boiling and filtering, without essentially weakening its action or destroying its odor.

In the treatment of both acute and chronic muscular rheumatism, Dr. von Hölder has found the new balsam to be particularly valuable, and he gives it the preference in those affections over all other external remedies. In mild cases a few inunctions are sufficient to relieve the pains. In acute articular rheumatism he has employed the inunctions as an adjuvant to the salicylic acid treatment, and is convinced that they materially hasten the disappearance of the painful stiffness of the joints, which persists for some time after the cessation of the acute symptoms. In chronic articular rheumatism and arthritis deformans the action of the balsam is naturally less striking; but he is convinced that it is in both, but especially the latter, a valuable addition to a well-directed course of massage. In the beginning of attacks of gout it has proved as useless as all other external remedies, but when the inflammatory redness and pain of the joint have begun to diminish, the inunctions undoubtedly hasten the re-establishment of the normal condition. As a rule, two or three inunctions daily are sufficient, and only a small quantity, about half a teaspoonful, of the balsam should be used each time. It has not been employed internally.—*Berl. klin. Wochen.*, No. 26, 1878.

TREATMENT OF FACIAL NEURALGIA BY ACONITINE.—Prof. Gubler states that he has never met with a case of neuralgia of the fifth nerve, even tic-douloureux, which failed to yield to aconitine. A man on whom Nelaton had performed the operation of resection of the nerve for violent neuralgia, with only temporary improvement, was entirely cured by aconitine, of which he took $\frac{1}{17}$ of a grain (0.005). Hottot's preparation of the nitrate of aconitine is the best to use; the dose is $\frac{1}{170}$ of a grain ($\frac{1}{4}$ milligramme), which contains $\frac{1}{1700}$ of a grain of aconitine. When this quantity fails to produce the effect desired, the doses may be increased, up to $\frac{1}{17}$ grain (0.006). Heart disease absolutely counter-indicates the drug.—*Med. Chir. Rundschau*, August, 1878.

PORPHYRIZED IRON.—This is prepared by M. Cabrol, of Paris, by mixing pure metallic iron (oxide) with cane sugar. It is claimed to be superior to the "dialized" iron.

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PAY PATIENTS IN HOSPITALS.

For many years the British medical press has been agitating the feasibility of establishing departments in hospitals for patients of the middle class who are able to pay for board and attendance, but who are too poor to secure, in connection with medical services, such advantages at their homes. Being a new proposition, there was considerable opposition to it, principally on the score that it interfered with the interests of the general practitioner, and militated against the true objects of the hospitals in general. The prejudices against the movement have gradually given way before discussion, and we now learn that the experiment is about to be tried in connection with St. Thomas's Hospital, London.

On general principles, and when viewed from the standpoint taken by the *Lancet*, viz., that none but worthy persons shall be admitted, the scheme is a praiseworthy one and deserves every encouragement, not only from the managers of the charity in question, but from the medical profession at large. Our experience in this country has shown us, however, that the system is liable to great abuses, and is very justly a cause for complaint with the general practitioner. There are a number of so-called pay hospitals in this and other cities in which the admission of pauper patients is the exception rather than the rule, and in which the pay system has been tried with a thoroughness that may give some value to the experiences connected with it.

So long as there is a guarantee on the part of the management that the number of pay patients admitted shall be strictly limited to those who are able to pay for hospital accommodation, and nothing more, the case is simple enough, and there is no reason for criticism. Generally, however, the temptation is to make the inmates pay the running expenses of the institution, and too often patients are admitted who are able not only to pay well for accommodations—nursing, etc.—but for medical advice besides. Some of the private wards are elegantly fitted up, and charged for at the rate of fifty dollars weekly, while medical attendance is expected to be rendered gratis by the attending staff. Such institutions are managed on the boarding-house principle, and no particular pains are taken to ascertain whether the patients, outside of their ability to pay their board bills, are worthy objects of the hospital advantages or not.

We have always held that the medical profession is too poorly paid, and that it more than gives its quota to the poor and suffering. While the latter is its glorious privilege, no corporation of laymen should take advantage of it. As it is easier to prevent than to cure, it may be proper for us to impress upon our transatlantic brethren, on the eve of their experiment, the necessity of guarding against the abuse in question by a suitable supervision of patients before entrance. In some of the hospitals, it is true, the attending physician or surgeon is allowed to charge well-to-do patients for his services. This is eminently just not only to the patient, but to the hospital and to the medical attendant. The latter is understood to give his services to the poor only, or to such as are able to pay a nominal board. But, as we have before remarked, the temptation is very great to ignore the claims of the profession regarding extra fees in the desire to increase the number of paying patients. At least, it is quite the exception for managers to actively defend the pecuniary claims of the profession. In fact, if it were not for the care which college professors take in excluding unworthy persons from the gratuitous advantages of their public clinics, the profession might actually suffer from a wholesale abuse of medical charity.

Our British *confrères* have anticipated this and kindred possibilities by suggesting that all applicants for admission in the pay department shall be passed upon by the examining physician, and if found competent to pay for medical advice outside, shall be refused. Except with the private cases sent specially to the hospital by members of the staff, and in which special pecuniary conditions are made beforehand, this plan of rejection of wealthy applicants is to be commended. Then no advantage can be taken, after entering the hospital, either by underbidding valuable medical service or by not considering them at all. When such cases are admitted, by accident or design, the only way to remedy the difficulty is for the member of the staff who may be on duty at the time to refuse gratuitous attendance. Under such circumstances as those to which allusion has been made we cannot doubt that the establishment of wards or hospitals for paying patients would be beneficial to the patients themselves, to the hospitals, and last, and of course least, to the medical profession. At all events we are quite anxious to see the experiment tried from that standpoint of British precaution which is taken against present and prospective abuses.

ADULT MEDICAL EDUCATION.

THE suggestions of Prof. Thomson, in his address before the Academy of Medicine regarding the necessity of adult medical education in this country, are worthy of serious consideration. In truth, there are no arrangements by which medical teaching can be given to practitioners such as is freely offered in Great Britain or the Continent. The question which we should seriously ask ourselves is, whether it is not time that a proper initiative should be taken and some suitable place selected for the delivery of lectures on special subjects by experts. There is no doubt that such courses would be popular with the profession, and would entirely replace the attendance upon medical lectures in our colleges, which seems to be the only resource at present for the practitioner who wishes to brush up his knowledge. The experiment deserves a trial, and the Academy could not do a wiser or better thing than take the matter seriously in hand. The worthy president of that organization is keenly alive to the true interests of the profession in this city, and needs no hint to point out the best course to be pursued.

THE INCREASE IN THE SIZE OF THE MEDICAL RECORD FOR THE COMING YEAR.

IT is gratifying to be able to state to our subscribers that the RECORD is again to be enlarged by the addition of two hundred pages during the coming year. This increase in size is warranted not only by the expansion of our subscription list, but by that of our advertising patronage. The latter has grown to such dimensions as to give rise to the suspicion that the body of the journal was sacrificed for the sake of the outside sheets. Far from this being the case, the RECORD contained two hundred pages more of reading matter than the year previous, and during that time there have been two volumes instead of one. With a still further increase in size during the coming year we shall endeavor to make the contents still more varied and valuable for the general practitioner. This change will also relieve the crowded state of our columns, will enable us to publish longer articles, give more space for society proceedings, reports of hospital practice, progress of medical science, and lastly, professional correspondence on topics of current medical interest. With these increased facilities for extending the usefulness of the journal we enter upon the duties of the forthcoming year with no vain hope for a continuation of success.

YELLOW-FEVER FUND.

FROM a note on another page it will be seen that the Hon. William M. Evarts, Secretary of State, has given $250 from the unappropriated balance in his hands to this fund. The Chamber of Commerce of the City of New York has given $2,000, and the Mayor of the city of New York, $179.46. The sum-total at the disposal of the Medical Society of the County of New York is about $5,250.

It is a matter of conscience and of considerable anxiety with the committee to distribute this sum promptly and wisely. It is in communication with New Orleans, Memphis, Chicago, Columbus, Ohio, and Cincinnati, and other places. Among the suggestions that have been made, are that one-half of the sum should go to the families of the Northern volunteer physicians who have died of yellow fever. New Orleans, Memphis, Vicksburg, Grenada, Holly Springs, Chattanooga, and other smaller places in the South have valid claims. The committee will gladly receive suggestions from all quarters, and it is hoped that those physicians who are personally acquainted with the wants of the suffering families will promptly report to the RECORD, or to the Chairman of the Committee, Dr. John C. Peters.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 7, 1878.

DR. S. S. PURPLE, PRESIDENT, IN THE CHAIR.

THE RADICAL TREATMENT OF LOCAL DISEASE AT THE MENOPAUSE.

DR. SUSSDORFF read a paper upon the above subject (see p. 486). The paper being before the Academy for discussion,

DR. CARO remarked, while he did not deny that many diseases were aggravated at the menopause, he did not regard that period in the life of the female as the real source of so many diseases as presented by the author of the paper.

While he admitted that the two periods, puberty and the period of "change of life," not only in females but in males, were very important, and important diseases were developed at those times, yet he thought it was too frequently the case that they were regarded as the causes of the condition into which a boy or girl had fallen, when in reality the presence of the disease was merely a coincidence.

At the age of forty in man important changes occurred, and if analogous conditions were developed in a woman at about that period in life, it was very commonly said it depended upon the menopause. If a disease already existed, it might grow worse at the menopause, but he believed that the aggravation came not from the cessation of the monthly period so much as from the advancement of age.

Two cases were reported in which urgent symptoms of disease entirely disappeared at the occurrence of the menopause. The first case was that of a woman, who had from the beginning of the period of puberty suffered every month from an attack of acute nephritis, which disturbed the general system to such an extent that for more than a week at each menstruation she was obliged to remain in bed. It was supposed that at the menopause the trouble would increase, and soon prove fatal; but at the end of thirteen years, after the cessation of the menses, the woman

was alive, and had no trouble whatever from the kidney affection.

The second case was that of a woman who suffered from extreme loss of blood at each menstrual period. It was necessary to resort to the most active measures allowable to restrain the flow, so that her strength could be maintained. When the menopause came the patient regained her full strength and health.

Dr. Caro thought the reason why writers had not said more concerning diseases of the menopause was because they entertained an opinion like his own, that they were diseases which disappeared as age advanced, consequently "change of life" should not be regarded as their cause. It was well known that crises occurred in life, but the doctor thought they were not due so much to cessation of monthly sickness as to the advancement of age.

Dr. H. T. Hanks regarded it as important to teach patients the necessity of consulting the family physician whenever anything approaching symptoms of disease were developed at or near the menopause. From his experience in one of the large charitable institutions in the city, he had become convinced that many persons, who, between the ages of forty-one and forty-nine years, had allowed all symptoms to pass without treatment, might have been saved from malignant disease had they consulted a physician as soon as symptoms were developed. Within a short time he had seen four patients who were suffering from cancer of the uterus in the third stage, and who, for a long time, supposed they had nothing more than what might be expected in connection with the "change of life." Doubtless many women were suffering from advanced malignant disease which might have been very much relieved, if not cured, had treatment been instituted sufficiently early.

Dr. Joel Foster believed that, if positive disease was present at the occurrence of the menopause, it might need local treatment, but that it was especially important to study and treat the general condition of the patient.

The Academy then adjourned.

Anniversary Meeting, December 5, 1878.

Dr. S. S. Purple, President, in the Chair.

ANNIVERSARY ADDRESS—THE WANTS OF THE ADULT MEDICAL PROFESSION—THE ENDOWMENT OF LECTURESHIPS.

Dr. Wm. H. Thomson delivered the anniversary discourse, which contained suggestions and points of interest as follows: After making brief reference to the wide field of trials which the practitioner of medicine is called upon to pass through in pursuit of knowledge which was to sustain him in his professional standing, he remarked that there were not a few physicians of fifteen or twenty years' standing who would rejoice in the passage of a law that would oblige the whole medical fraternity to take an entirely new course of medical instruction in all its branches, not excepting the most elementary ones.

To the uninstructed it might, from such a statement, appear that medical experience was unlike every other experience, causing a loss instead of a gain in knowledge. The truth in the case, however, was very different. That such a feeling existed was to the credit rather than to the discredit of medical science, yet it was none the less operative as one of the trials of our professional life. The man who invested in a knowledge of law was tolerably well assured that he had invested in permanent securities, and to say that a lawyer kept up in his profession meant but little more than rising in it.

For the physician, however, no such anchorage existed, but instead, he must expect that much of the freight which he had taken the trouble to collect and stow away would suddenly become unsalable or go out of the market entirely. Not only that, but he must be careful with regard to the exhibition of his wares, lest he expose himself to justifiable yet severe and unlooked-for criticism. The busy practitioner could no more go over each branch of medicine in review than he could review his youth in each and every respective part. The most that he could do was to read something of the current medical literature of the day, and study the journals, which frequently were about as instructive and trustworthy as the reports of the Sunday sermons in the daily newspapers.

Reference was then made to some of the new discoveries and announcements made in medicine within a few years, such as that the blood is to be classed among the tissues, that a serous membrane had been found to be nothing more than a lymphatic gland spread out thin, etc., etc., to say nothing of the nervous system with its mass of anatomical details, and the details of the supposed physiological arrangements. If the difficulties in keeping pace with the anatomical and physiological advancement were so great, how great must be the maze of difficulties involved in the study of disease itself!

The truth was that, from the very nature of the case, the time had long passed since it was possible for any one man to know what there was to be known about the human body, either in health or disease, and yet we were far from the point at which knowledge was complete.

The doctor then gave a brief review of the requirements and the deliberation manifested in the pursuit of medical study in the European universities. Our medical schools, however, partook of none of the great though subtle appearances of university life. As their support was derived entirely from their pupils, the average length of the pupils' purse was a good cue to the length of the course of study given them. The deficiencies in the course of primary medical education in our country to-day was a good illustration of one of the most prominent wants now felt by those interested in medical scientific pursuits in order that they might be able to keep in the ranks of those who were at work in special directions. In other words, we were deficient in opportunities for obtaining adult medical education. The man who, perhaps for years, had struggled to get a practice, at the end of that time made the unwelcome discovery that his practice had got him. Any studious course of medical reading implied not only time, but a proper condition of mind for it; but, as a rule, the leisure hours of the busy practitioner found him but poorly prepared to engage in any such pursuit. A practical question was, how could those needs of the active profession be met?

The suggestion that medical schools could answer the question was at once dismissed; for, however advanced such schools might be, they never could be adapted to meet the wants of the student and his preceptor at the same time.

The creation of medical societies was undoubtedly intended to supply that want, but experience with reference to medical societies was the same the world over. If they depended solely upon papers read before them for the interest which the profession would take in them, then the life and activity of the association would have an intermittent and fluctuating

character. Something more was requisite in order to insure a steady and effective influence which should tend to crystallize about it the best talent of the medical ranks. For a systematic exposition of a scientific subject, the form of a lecture was believed to be indispensable.

The entire proceedings of a society meeting were as foreign to the natural belongings of a lecture as could be imagined, and addresses by distinguished men upon subjects to which they have devoted special attention had not been given according to any such system.

The disadvantages of the method of inviting such men to lecture in medical colleges, and extending a general invitation to the profession, were apparent. There was no place, so to speak, for lectures for physicians; therefore there were no such lectures. But was there no want for such lectures?

Considering all the elements of the case, it was a wonder that both place and lectures had not been in existence long ago. There were those among us who could at any time make the profession acquainted with all that was known upon his special subject, and that a true representative man should fail of an audience was unlikely. A well-trained lecturer possessed an immense advantage over the author, by being able to arrange the different portions of his subject in such a manner as to allow a rapid view of the whole.

Without presuming to advocate it as a measure, Dr. Thomson suggested that the New York Academy of Medicine consider the advisability of instituting one or more endowed lectureships through which the adult medical profession might be instructed and kept in view of the advancements made in medical science. A brief review was then made of the history of the Gulstonian, the Crunonian, and the Lettsomian lectureships of Europe, and the benefit which they had conferred upon the medical profession.

Dr. Gulston's lectureship was established in 1632, Dr. Crune's in 1684, and each was surrounded with certain restrictions. Dr. Lettsom founded his prize for medical monographs in 1773. He did not hedge it in as did the other men, but made a broad and unfettered provision, leaving to posterity the right performance of its end and duties. The conclusion reached was, that whatever organization should establish such a lectureship in this country, would do so to its own lasting credit and to that of the American medical profession in general.

A vote of thanks was extended to Dr. Thomson for his able and interesting address.

The Academy then proceeded to the transaction of the regular business of its Stated Meeting.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 27, 1878.

DR. A. C. POST, PRESIDENT PRO-TEM., IN THE CHAIR.

SUBPERIOSTEAL EXCISION OF HUMERUS.

DR. J. W. HOWE presented a specimen of chronic ostitis of the humerus, which he had removed by operation. The history of the case was as follows:

S. Connor, æt. three years, was admitted to Charity Hospital suffering from chronic ostitis of the upper four-fifths of the humerus, with synovitis of the shoulder-joint. The disease had commenced a year previous to admission, with pain and swelling of the arm and stiffness of the joint. It was not originated by injury. On examination, the diseased humerus was found to be very much enlarged. On the anterior surface of the arm there was a large ulcerated surface communicating with ulcers in the bone. There was a constant discharge from the sinus of fetid pus and small particles of carious bone. Pressure with the probe showed that the bone was soft and carious all over the anterior and inner aspect. At the upper end of the ulceration, in the soft parts, a sinus was found which extended into the shoulder-joint.

After some preparatory tonic treatment I made an excision extending through the ulcerated tissues from the acromion process to within an inch of the elbow-joint, and stripped off the soft part on either side. The periosteum was intact on the posterior and inner side of the bone. This was carefully separated up to the head of the humerus. The muscles attached to tuberosities were then cut and the bone disarticulated. A saw was applied below, about an inch above the elbow-joint, and the bone cut through.

The only dressing applied to the wound was lint steeped in olive-oil, the arm afterwards being covered with a bandage. The wound healed nicely, and new bone formed out in three months from the date of operation. The child had an excellent humerus with perfect motion in both joints, and the wound was entirely healed. The new humerus was larger than the one on the opposite side.

DR. POST remarked that he had seen a number of cases of ostitis in the bones of young subjects, affecting the arm particularly, but he had found in all that the disease did not extend above the cartilage which separates the epiphyses from the diaphysis.

MUCOUS PATCH IN THE LARYNX, WITH GENERAL TERTIARY SYMPTOMS.

DR. BEVERLEY ROBINSON presented the heart and lungs of a male patient, aged 31 years, who died the Saturday previous, a few days after admission in the Charity Hospital. At the autopsy, which was made on the Sunday following, very interesting lesions were found: chronic meningitis, acute nephritis, generalized œdema of left lung, circumscribed pneumonia of the left lung, pericarditis and hypertrophy of the heart. The pericarditis was a beautiful specimen of its kind, and was presented on that account. He also exhibited the larynx removed from the same patient, with the view of demonstrating what he considered to be a rare occurrence, viz., syphilitic ulceration of the vocal cords. The man stated that he had syphilitic disease five years ago. He presented also upon his body the signs of old syphilitic infection. His voice was husky. When the larynx was opened, the vocal cords were found to be very much thickened, and presented the cicatrices of old ulcerations. On the posterior surface of the epiglottis there was a small lenticular ulceration which presented rather an opaline and eroded appearance, and was surrounded by an elevated margin. He believed them to be opalescent mucous patches in the larynx, a condition which, despite the frequency with which they are said to occur by some authors, he had never seen before. Authors also described syphilitic lesions of the skin and those of the mucous membrane as occurring together, and as having the same grade. He was convinced that this statement was not founded on fact, the case in question being an instance in point, the man suffering from well-marked tertiary symptoms at the same time that there was a mucous patch in the larynx.

DEFORMITIES OF FACE AND HANDS FROM CICATRICIAL CONTRACTIONS—RESECTION OF ARTICULAR EXTREMITIES OF DISTORTED PHALANGES.

DR. A. C. POST presented portions of bone from the distal extremities of the first phalanx of the

thumb and the second phalanx of the index finger, with the following history:

John W., born at Patchogue, L. I., December 25, 1876. On the 27th October, 1877, he fell over with a high chair to which he was tied. His face fell on the upper rim of a heated stove. The backs of both hands were brought into contact with the side of the stove, the commissure which joins the thumb and index finger of the right hand embracing a projecting bar of iron. The back of the left hand was burned much more severely than that of the right. Cicatrization was complete in about three months. Before the healing of the sores, a number of pieces of bone were discharged from the left hand.

Nov. 6, 1878.—The present condition of the child is as follows: General health good; mental and bodily development beyond the average. The right angle of the mouth is rounded, thickened, and indurated. A cicatricial ridge extends from the right commissure of the lips to the front of the chin, and obliquely upward and outward to the lobe of the ear, varying in breadth in different parts from half an inch to an inch.

Right hand.—The thumb, at its distal joint, is acutely flexed, and immovably bound down to the palm of the hand by very dense cicatricial tissue. There is complete luxation at this articulation. The distal phalanx of the index finger is subluxated outward, at an angle of about 45°, and is quite immovable. The index and middle fingers are webbed together on their dorsal surfaces, from their commissure to the articulations between the first and second phalanges. The web does not involve the palmar surface. There is free motion of all the articulations of the fingers, with the exception of the distal articulation of the index finger.

Left hand.—The thumb and ring finger enjoy perfect motion. The thumb is uninjured. The ring finger is slightly drawn back by a cicatricial band, which does not essentially interfere with its movements. The little finger is drawn obliquely backward and outward, to an extreme degree, by a dense mass of cicatricial tissue. The distal phalanx is slightly flexed, and there is a little perceptible motion. The index and middle fingers are much distorted, drawn backward, and immovably fixed. The index is dwarfed and thrown behind the medius. The distal end of the medius is bent backward in the direction of exaggerated extension. A very thick, hard cicatricial mass, in which the index, middle, and little fingers are imbedded, occupies half of the dorsal surface of the hand.

I began the treatment, November 6th, with an attempt to improve the condition of the right hand. I made a longitudinal incision on the dorsal surface of the index finger, about three-fifths of an inch in length, extending over the distal extremity of the second phalanx and the proximal extremity of the third phalanx, dividing the skin, the extensor tendon, and the periosteum. I then carefully separated the periosteum from the bone, and with Liston's bone-forceps divided the bone of the second phalanx nearly a quarter of an inch from its distal extremity, and removed the end of the bone. I also excised the cicatricial band, by the contraction of which the end of the finger had been distorted. After this I was able to draw the end of the finger into its normal position, but it required some effort to hold it there.

I then dissected up a triangular flap from the palm of the hand, the base of the triangle towards the articulation of the first phalanx of the thumb with the corresponding metacarpal bone, dividing the cicatricial mass on each side, but the end of the thumb was liberated to a very slight degree. I then excised the distal end of the first phalanx of the thumb in the same way in which I had operated on the index finger, and about to the same extent, after which I was able to bring the end of the thumb into a nearly straight position. I divided the web connecting the index and middle fingers well up to the commissure.

After waiting for the oozing of blood to cease, I washed the wound thoroughly with a solution of carbolic acid, 1 to 40. I then brought together with fine sutures the wounds on the back of the index and of the thumb and a portion of the wound in the palm of the hand. I then applied a felt splint, stiffened with shellac, to the dorsal surface of the forearm, hand, thumb, and fingers, securing the different parts to the splint with adhesive strips and a bandage. The distal end of the index was not as fully adducted as I had desired, nor was that of the thumb as fully extended; but there was a very marked improvement in the position of these parts.

7th.—I found the patient in a very good condition, bright and playful. The dressings did not seem to have been at all disturbed or loosened.

8th.—Dressed the wounds, washing the parts freely with a solution of carbolic acid, 1 to 40.

27th.—The wounds have been dressed daily since the 10th, making a free application of the carbolic acid solution at each dressing, and applying nitrate of silver to exuberant granulations as often as became necessary. Passive motion has also been made from time to time. The position of the thumb and finger has improved. The wounds are nearly healed. The interdigital space between the index and middle fingers has been maintained by crowding strips of adhesive plaster up to the commissure during the healing process. There is a good prospect that the deformities resulting from the cicatricial contractions on the right hand will be almost entirely overcome, and that useful motion will be restored to the parts which had been deprived of it.

Correspondence.

ATONY OF BLADDER TREATED BY INJECTIONS OF ACIDULATED COLD WATER.

To the Editor of The Medical Record.

Dear Sir:—In your journal for September 28, 1878, Prof. Wm. H. Van Buren, in an article on "Lithotrity by a Single Operation, with Cases," page 244, remarks that "the use of cooler water in daily washings of the bladder by means of the fountain-syringe, and the gentle and effectual fomentation of the surface of the irritated organ thus accomplished, is the best local remedy for atony;" but how cool the water must be he does not state, but I infer he means water below tepid or blood heat. Up to this time, all authorities that I have consulted on this subject have advised, whenever it was necessary to irrigate the bladder in cystitis or atony, tepid injections, medicated or not, as the case may require.

The perusal of this paper of Prof. Van Buren brings to my mind two cases of atony with dilatation—not, however, from the cause above alluded to, but from previous want of innervation and consequent over-distention of that viscus—treated, years ago,

successfully by the injection of cold water acidulated with cider-vinegar.

July 15, 1866, I was called in great haste to see Thomas W., æt. 30 years. He was of feeble intellect, but generally healthy; had been under treatment for syphilis for the last eight months, but presented at the time none of the secondary manifestations of the disease. The patient lived in an almost inaccessible mountain home, twelve miles from this place (Newbern, Va.). I found him in great agony from retention of urine; the bladder reaching up to the umbilicus. I lost no time in introducing the catheter, and drew off a large quantity of urine, to the great relief of the patient. The bladder filled again, but he was, with all the assistance that could be afforded him, unable to pass a drop, consequently the catheter had to be used again the next morning. The patient now requiring so much of my time, from the great distance I had to ride to see him, was turned over to the care of a second course student then studying in my office, who spent most of his time with him and on the road for eight or ten days, until finally, worn out and patience exhausted, he insisted I should see the patient again with him, to which I consented. When the catheter was introduced into his bladder, which was considerably distended with urine, there was but little flow, nor could he force it out by voluntary efforts, but the organ could be emptied only by pressure over the abdomen. The urine was very offensive, and when the pressure over the abdomen was relaxed, the air could be heard gurgling up through the catheter into the bladder. In this extremity, arguing from uterine analogy, I directed him to inject the bladder with cold spring or branch water (about 80° F.), and as the urine was ammoniacal, to acidulate it with cider-vinegar; this I could not carry out at the time for want of a syringe. The directions were carried out the next day by my assistant, when three injections of four ounces of the mixture were used at one sitting; this was repeated again the next day, and the day after the patient was reported as doing well and able to pass his urine without the aid of an instrument. I saw him some weeks afterwards entirely relieved.

July 22, 1868, I was called in haste to see Julia R., æt. 20 years. She had been confined to bed for four weeks with a severe attack of typhoid fever, which had so far subsided that I had not visited her for several days. Her health was good previous to this typhoid attack. I found her abdomen enormously distended, though the urine was dribbling on the bed. The catheter was introduced and the bladder emptied, to the entire relief of the patient. The patient lived five miles over a rough road from Newbern, so that to attend her I had to spend most of my time with her or on the road, as I could not induce any of the female part of the family to undertake to learn to introduce the catheter. The bladder could be emptied only by pressure over the abdomen, and the urine after four or five days became very offensive. There was complete atony, and my patience was now well nigh exhausted. Remembering the happy result in the case of Thomas W., I resolved to try the same method of treatment in this; so I injected into her bladder, after thoroughly emptying it, about four ounces of the cold water (about 70° F.) and cider-vinegar, and repeated it at the same sitting, both of which the bladder responded to by expelling the injection. The injection was not again repeated, for she had no further difficulty in emptying her bladder.

The cider-vinegar was suggested because it is an antiseptic of no mean power, and because it seems to have a very decided effect when applied to the inner surface of the uterus in inertia of that organ, and it is always convenient.

After the treatment of the last case, it was suggested by a professional brother, to whom the facts were related, that I should publish it, to which I replied that I would probably have other cases of a similar character to treat that would establish the value of the method, and that, then, if there was anything in it, I could publish it for the benefit of the profession; but since the last case related in this paper was treated, I have not had another of similar nature in which to further test its value.

W. H. Bramblett, M.D.

Newbern, Va., Nov. 27, 1868.

CONTAMINATION OF WELL WATER.

To the Editor of The Medical Record.

Dear Sir:—The following was furnished me by my friend Dr. Eldredge, a distinguished physician of Rhode Island. I quote his own words. The facts, as related, took place at a town known as East Greenwich, where the Doctor resides.

"Three or four pailfuls of brine, accumulated daily in making ice-cream, were thrown into a pit three or four feet deep, and twenty-five feet west of a well on the premises. In two months the water in this well was salt and unfit for use. In four months, or about that time, another well forty feet deep, and across the street and in the same direction (a little north of east) from the brine receptacle as the first, full one hundred and fifty feet distant, was also made unfit for use, the salt being perceptible in tea and coffee. The surface slopes quite sharply to the east, and is underlaid by rock at fifteen or twenty feet, having the same dip as the surface. When the cause was discovered, some other disposition was made of the brine, the wells pumped out and cleaned, and at this time, more than a year after, they are better, but not quite free from salt."

This, in view of statements lately made concerning the drainage on the North River, may be instructive.

Respectfully,

W. W. Hoppin, Jr.

SOME RECENT FACTS CONCERNING TRICHINÆ.

(From our Special Correspondent.)

To the Editor of The Medical Record.

Sir:—Some investigations have just been completed by two Chicago microscopists as to the prevalence of trichinæ in the pork that comes to our markets, that seem worthy of record. Some time ago Dr. Wm. T. Belfield, Demonstrator of Physiology in Rush Medical College, and Mr. H. T. Atwood, Vice-President of the State Microscopical Society of Illinois, were asked by the Commissioner of Health of Chicago, Dr. DeWolf, to examine specimens of pork taken at random from the hogs being slaughtered at the different slaughtering houses. Specimens from one hundred hogs were carefully examined, and in eight trichinæ were found, the number varying according to estimate from thirty-five to thirteen thousand to the cubic inch of muscle. This is doubtless approximately the average of infection of the pork brought to Chicago for packing. The trichinous disease among hogs—if disease it is—must be much

more prevalent now than ten or twelve years ago. Then an examination of quite a large number of hogs in behalf of the Academy of Sciences showed only about one in fifty infected.

Messrs. Belfield and Atwood have experimented with rats and other animals, to which they have fed trichinæ, and have reached the conclusion that, taken in small numbers and not too frequently, any animal or man may eat these worms with impunity. A rat weighing two ounces was fed at intervals of two or three days a few trichinæ for six weeks, when it was killed. It was full of live trichinæ—which, immersed in warm water, would move vigorously—the estimated number in the rat being 100,000. During the six weeks the rat appeared perfectly healthy. Dr. Belfield felt so sure of the innocuousness of small numbers of the worms, that he made a practical test by himself eating twelve live trichinæ three weeks ago. He has not experienced an unpleasant symptom to date. He believes a large per cent. of our population are really infected with trichinæ. It is a fact in confirmation of the theory of these observers, that many of the infected hogs have received the trichinæ without symptoms of disease, certainly without any damage to their fattening qualities. It is surely impossible that eight per cent. of all the hogs raised for market could get sick with symptoms approaching in severity those of severe human infection, without such a panic among farmers as would be noticed by the whole country.

Some experiments with different agents used for the destruction of the worms showed that the best inexpensive agent was sulphurous acid; a very little of this acid, mixed with the brine in which pork is preserved or pickled, will kill all the trichinæ, without, of course, any damage to the pork for any purpose. The lowest per cent. of the acid required to be effectual has not yet been determined.

B.

Chicago, Dec. 10, 1878.

YELLOW FEVER FUND.

Department of State, Washington, Dec. 19, 1878.

John C. Peters, M.D.:

Dear Sir—I have to acknowledge the receipt of your letter of the 8th of November, directing my attention to the action of the Medical Society of the County of New York in establishing a fund for the relief of physicians and their families who have suffered by the yellow fever epidemic, and requesting that a portion of the foreign subscription fund, in my hands, should, if possible, be contributed to that fund.

I read your letter with much interest, but have delayed replying to it until the condition of the funds should be such as to enable me to decide what portion, if any, of them I could use in accordance with your suggestion.

I am now happy to inform you that I find myself able to place $250 at your disposal, and I shall be pleased to be notified by you of your wishes in regard to it.

I am, my dear sir, very truly yours,

Wm. M. Evarts.

Antiseptic Surgery.—The cost of the antiseptic system in the Glasgow Royal Infirmary is so great that it has excited the serious consideration of the managers.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 15 to December 21, 1878.

Janeway, J. H., Major and Surgeon. Assigned to temporary duty at Fort Wood, N. Y. H. S. O. 231, Dept. of the East, December 16, 1878.

Brown, H. E., Capt. and Asst. Surgeon. From and after January 1, 1879, to take station at Camp "Guilford D. Bailey." S. O. 264, Dept. of Texas, December 16, 1878.

Loring, L. Y., Capt. and Asst. Surgeon. Assigned to duty at Fort Hays, Kansas. S. O. 226. Dept. of the Missouri, December 12, 1878.

Medical Items and News.

Phlegmonous Erysipelas and Ophthalmia Neonatorum.—Dr. Francis Valk, of this city, sends us the report of a case of phlegmonous erysipelas occurring in a woman æt. 45 years, who was nursing a baby suffering from *ophthlmia neonatorum*, and due, in all probability, to the absorption of pus from the child's eyes by an abraded surface upon one of the fingers. The inflammation involved the hand, forearm, and inner aspect of the arm to the axilla. Hot water sponge-baths, lead and opium lotion, quinia and iron caused a prompt subsidence of the affection. A small abscess on the radial side of the middle finger was opened on the eighth day subsequent to the appearance of the first symptoms.

American versus European Specialists.—Col. John W. Forney, writing in *Progress*, says: "While in London, last winter, I had a call from an old friend, Mr. William H. Lockard, Superintendent of the Eastern Division of the Pennsylvania Railroad. Born in my native county of Lancaster, in this State, and now living in West Philadelphia, he grew from a very humble beginning, by sheer energy, to a high position on the great iron road between the rivers Ohio and Delaware. But in the midst of his usefulness, he was smitten by what seemed to be a paralysis of the muscles of the eyes. His friends, alarmed at his condition, advised him to consult the eminent oculists of the old world, and they wrote me in advance that he was coming. I had despaired seeing him, when one day he walked in upon me. He had consulted the best talent in Italy, Germany, and France, without success, and I assisted him to a knowledge of the great specialists of London. But all in vain. Every process was tried, with no result, and at the end of a long and costly experience he returned home with a number of conflicting diagnoses of his complaint—in fact, a small literature on the eye. He was in great mental agony when we parted, and I left him with a sincere solicitude. On my return to Philadelphia, I found that my old friend had taken the advice I gave him in London. He called on Dr. Richard J. Levis, Sixteenth and Walnut Streets,—and in a second interview, that skilful operator discovered the source of the disease and applied the remedy, and, almost in a twinkling, restored him to a perfect vision. The disease was diplopia, or partial paralysis of the ocular muscles. The relief and joy of Mr. Lockard can hardly be conceived. Moral.—Before you spend your money on foreign skill exhaust your home material. What adds to the interest of the whole case is the fact that neither the patient nor the surgeon have

ever made the slightest public allusion to it. But if Lockard had been restored by any of the European oculists, it would have been blazoned in their scientific journals as a marvellous achievement."

THE NEW PENNSYLVANIA STATE HOSPITAL FOR THE INSANE, NEAR NORRISTOWN.—The first act of Assembly from which the hospital commission derived its authority appropriated $25,000 toward the purchase of land, not less than two hundred acres, and subsequently $575,000 was appropriated, payable at stated dates, making a total of $600,000 toward purchase of land and construction of buildings.

After the most careful examination, by personal inspection of many farms within the limits of the district, the Commission selected and purchased, with the approval of the Governor and the Board of State Charities, the several farms near Norristown, at a cost for the whole land and buildings thereon of $58,180. The contract for building was made March 18, 1878. The land purchased contains two hundred and sixty acres, and is about a mile from Norristown, and a fine view is had of that borough, as well as the surrounding country, from the new buildings, and from almost every portion of the farm. The location is not only a very beautiful and healthy one, but is admirably situated to aid the contractors in pushing the work to an early completion.

The fine bricks of which all the buildings are constructed are manufactured within a few hundred yards of the new edifices, and the stone for the foundation is also obtained close at hand. The contract entered into with Mr. John Rice was for seven ward buildings, each 91 by 285 feet, and capable of accommodating one hundred patients each, boiler-house, kitchen, and chapel. Five of the ward buildings and the boiler-house are under roof, and the first floor joists laid on the other two. The chapel foundations and the connecting corridors are all laid. Ward buildings Nos. 2 and 3 have been plastered, and Nos. 4 and 5 well under way in this respect, with much of the interior carpenter work done. The total cost of the work to Nov. 30, 1878, was $259,800.

These buildings occupy three sides of a square, and present a very fine appearance. No special style of architecture is used, and no attempt has been made at display; but they look, as they really are, substantial, neat, and well adapted for a home for the indigent insane.

The work of laying bricks was commenced the 30th of last April, and since that time 9,800,000 bricks have been put in the buildings now erected. To prepare for the foundations 32,500 cubic yards of earth had to be excavated, 7,000 perches of masonry have been laid, besides 6,370 cubic feet of belting stone and 6,000 of marble. 1,000 squares of slate have been used for roofing, in addition to 18,000 square feet of tin. The lumber so far used amounts to 1,800,000 feet, and the iron work has reached to 45 tons. At one time nearly four hundred men were employed. The force has been reduced to seventy, principally plasterers and carpenters.

Although in the general plan adopted there is provision for a suitable administration building, which will doubtless be required, the work on that has not been commenced, it having been decided by the Commission to utilize the existing farm buildings for that purpose at present, and devote all the means necessary for the erection of the ward and other buildings required for the use of the large number of insane who will become inmates of this hospital.

The progress of the work thus far and its present advanced condition justifies the confident expectation that during next summer the buildings now contracted for and in progress will be completed and ready for use, and delivered by the Commission to the State authorities.

The Hospital Commission consists of General Joseph Patterson, President; William H. Miller, Treasurer; A. G. Burt, Secretary; Hon. John Shouse, General Robert McAllister, James S. Chambers, and Doctors Thomas G. Morton, H. G. Howe, L. W. Reed, and N. A. Pennypacker.

OXALATE OF CERIUM IN CHRONIC COUGH.—Dr. James G. La Roe, Jr., of Greenpoint, L. I., writes: "In THE MEDICAL RECORD, bearing date May 25, 1878, and credited to the *Practitioner*, is a short article on the use of oxalate of cerium in chronic cough. It is highly lauded by Thomas Clark, L.R.C.P., etc. In doses of five grains, we are told, it is a good sedative, and hence its usefulness in lung-troubles. Its virtues in stomach-complaints are fully appreciated. In the intractable vomiting of pregnancy I have found it the remedy *par excellence*. It struck me, however, that the dose was rather large. Two-grain doses, in my hands, have done the tranquillizing work desired. I had been treating a lady whose phthisical cough was a source of great worriment to me. Everything suitable to the case was tried, but to no effect. The cough was incessant, and wore her completely down. The drugs, which had served her so well hitherto, refused now to give her even partial rest. As I never tried it in lung-troubles, I determined to give the oxalate of cerium strictly according to directions. Five grains were ordered to be taken a half hour before rising. The result was, my patient was unable to get out of bed until late in the afternoon. That the drug was a sedative admitted of no doubt, for Mrs. L. did not gain her full senses until the time indicated. She described herself as having been in a stupor all day. The reaction, seemingly, made her cough as bad, if not worse, than before. Altogether, the effect was rather unpleasant. Of course, her memory as to whether she coughed meanwhile went for nothing. It was beyond her power to grasp any fact until the profound sedative action had passed away. I was anxious to see if these feelings would be repeated, and so prevailed on her to try once more. The same result occurred again. That the dose was too large was very manifest. Equally suggestive was the thought that its true vocation was in a smaller quantity. It required not a little persuasion to get Mrs. L. to try still further. I only succeeded after declaring I would desist after this trial. I directed half a powder to be taken in the same manner as before. The sequela was all that could be desired; I was fully repaid for my persistency. My patient did not cough the remainder of the day, and felt very grateful in consequence. She took the medicine several times more, not waiting to be told to do so. Since then the oxalate of cerium has done duty several times in Mrs. L.'s case, and with the greatest satisfaction, as before.

"In one other case, within a few weeks past, and of precisely the same nature, I ordered the drug to be taken in three-grain doses. The *finale* was in every way gratifying."

UNUNITED FRACTURE OF TIBIA.—A case of unmanageable ununited fracture of the tibia was successfully cured by Dr. Guyon, at the Hospital Necker (Paris), by three subcutaneous injections of tincture iodine between the ends of the bone. Union was complete in six weeks.

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